OPEN SCIENCE
From Vision to Action

**Open Science Seminar
Crue Universidades Españolas / Conselho de Reitores das
Universidades Portuguesas**

Madrid , 22 June 2017

JC Burgelman,

P. Brenier, R. Von Schomberg, W. Lusoli, D. Spichtinger, C. Asero

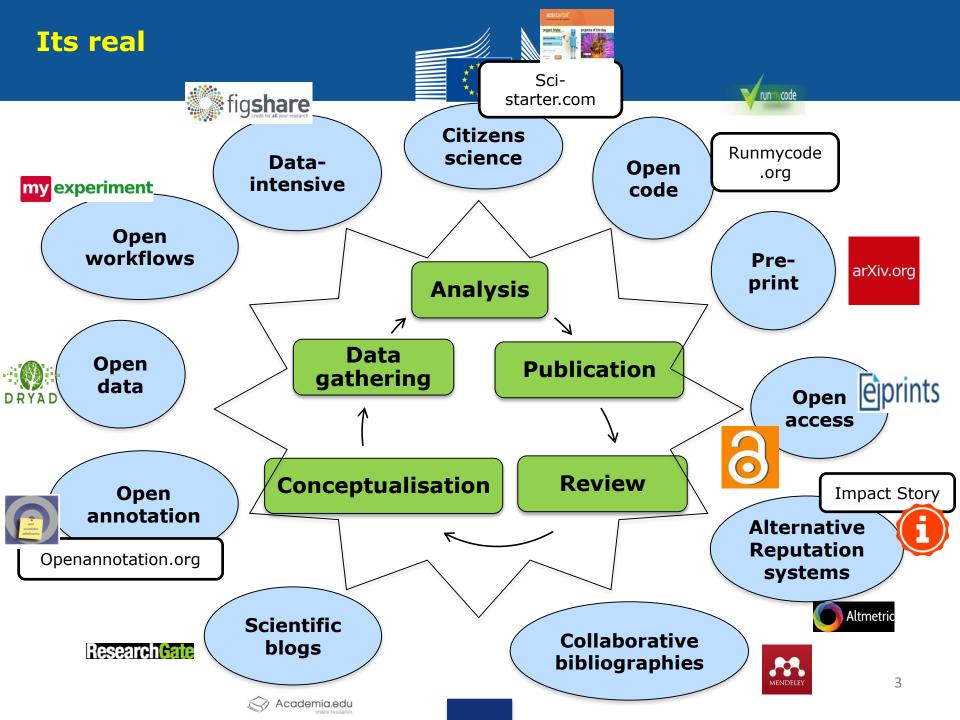Open Data Policy and Science Cloud
Directorate A
DG RTD

Open Science = Systemic transition of science system which affects the way

- research is performed
- knowledge is shared/diffused/preserved
- research projects/results are evaluated
- research is funded
- researchers are rewarded
- future researchers are trained

Affecting the whole research cycle and all its stakeholders

- ✓ A typical techno-economic paradigm shift a la Perez (technology, market and institutional change go hand in hand)
- ✓ or to put it different: disruptive and hence disturbing….

Its real

- Data-intensive
- Citizens science
- Open code
- Open workflows
- Pre-print
- Open data
- Analysis
- Data gathering
- Publication
- Open annotation
- Conceptualisation
- Review
- Open access
- Alternative Reputation systems
- Scientific blogs
- Collaborative bibliographies

Sci-starter.com

Runmycode.org

arXiv.org

Impact Story

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Not happening in isolation & irreversible

- Open source software
- MOOCs
- Collaborative knowledge production
- Creative commons
- Open innovation
- The sharing/collaborative economy
- Web 2.0
- Big data
- Digital natives

European Commission

Structural gnomics consortium
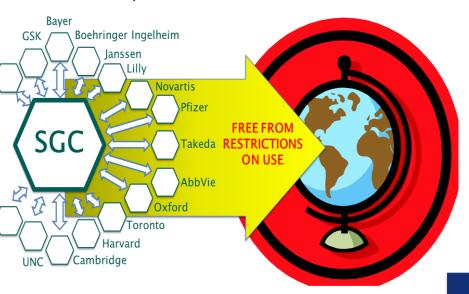
Public–Private Partnership	Public Domain	Commercial

Tools & Basic Knowledge NOVEL Proteins only!

- Structure
- Chemistry
- Antibodies
- Screening
- Cell Assays

Discovery and Exploration

- No patent
- No restriction on use
- Open access to tools and data.
- Target identification & validation
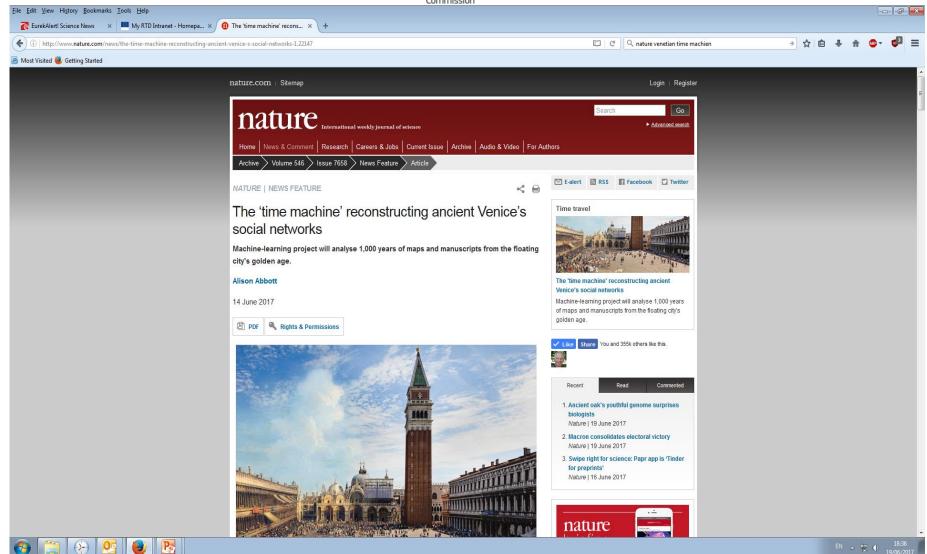
Drug Discovery and Development

Facilitated by access to increased amount of information in the public domain

- (re)Screening
- Lead Optimisation
- Pharmacology
- Metabolism
- Pharmacokinetics
- Toxicology
- Chemical development
- Clinical development

Bayer
GSK
Boehringer Ingelheim
Janssen
Lilly
Novartis
Pfizer
SGC
Takeda
AbbVie
Oxford
Toronto
Harvard
UNC Cambridge

FREE FROM RESTRICTIONS ON USE

Very Promising
for ALL sciences

Great opportunities for science, scientists and society

- Better ROI of the R&I investments
- Faster circulation of new ideas (22 million EU SME's)
- More transparency of the science system as such
- Fit for 21st century purpose (all grand societal challenges NEED cross disciplinary research)

For researchers:

- Wider dissemination and sharing of the results
- More visibility and credit for those collecting and sharing underlying research data
- New career paths e.g. data scientists, start-ups, science diplomacy

European Commission

... the market

- **20m active scientists** worldwide in scientific, technical, medical (STM) disciplines
- **8m researchers** in the humanities and social sciences (HSS)
- **24,000** scientific **journals** in STM
- **17,000+** scholarly **societies**
- **2,000** publishing **companies**
- **4m submitted** scientific manuscripts per year
- >50% rejected = **1.8m publications** (STM)

In total in 2014, LERU members alone had an economic impact across Europe of

€71.2 billion GVA
900,000 jobs

Study by BiGGAR economics
www.biggareconomics.co.uk

*"As I see it, European success now lies in sharing as soon as possible, (...). The days of **open science** have arrived."*

Speech at "Presidency Conference Open Science", 04 of April, 2016, Amsterdam

EC OS policy: bottom up & co-design

European Commission

Extensive stakeholder consultation

✓Public consultation (July-September 2014)
✓Validation workshops (October-December 2014)
✓Final report (February 2015):
http://ec.europa.eu/research/consultations/science-2.0/science_2_0_final_report.pdf

Strong support by Member States and Competitiveness Council

✓Policy debate & Council conclusions 'data-driven economy' May 2015
✓Presidency conference Open Science &
✓Council conclusions 'open science') May 2016

European Open Science Agenda

✓Broad consensus on five policy lines and 8 Action
✓Open Science Policy Platform
✓Embedded in the Digital Single Market strategy

2016 – Holistic Policy Agenda: scope & ambitions

… 4 with regard to the use & management of research results and data

✓ **Open Data**: FAIR data sharing is the default for funding scientific research

✓ **Science cloud**: All EU researchers are able to deposit, access and analyse European scientific data through the open science cloud, without leaving their desk

✓ **Altmetrics**: Alternative metrics to complement conventional indicators for research quality and impact (e.g. Journal Impact Factors and citations)

✓ Future of **scholarly communication**: All peer reviewed scientific publications are freely accessible

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… 4 with regard to relations with <u>research actors</u> (researchers, institutions and funders)

- ✓ **Rewards**: The European research career evaluation system fully acknowledges Open Science activities
- ✓ **Research Integrity**: All publicly funded research in the EU adheres to commonly agreed Open Science Standards of Research Integrity
- ✓ **Education and skills**: All young scientists in Europe have the necessary skills and support to apply Open Science research routines and practices
- ✓ **Citizen Science**: CS significantly contribute and are recognised as valid knowledge producers of European science

Now

- **Open Access to Publications**: since 2014 mandatory

  Set up of an **Open Access Publications Platform**: stand alone   peer reviewed scientific articles resulting from H2020 projects (2017-2018)

- **Open Access to research data**: default from 2017 onwards.
  - Opt-outs possible at any stage (IPR, personal data protection and national security)
  - Research Data Management Plans: mandatory and FAIR
  Set up of the European Open Science Cloud: a trusted virtual environment for enabling data driven science across boundaries and disciplines (2017-2019)

- **Mainstreaming** in all MS

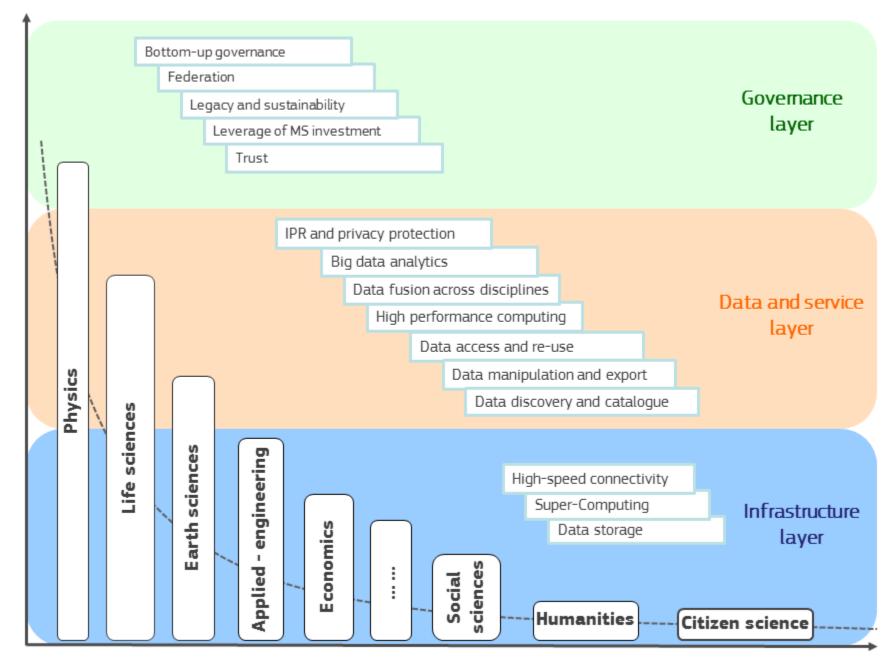# AS OPEN AS POSSIBLE, AS CLOSED AS NECESSARY
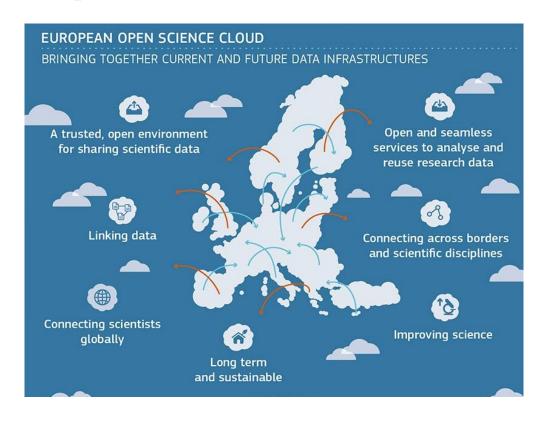
Top three reasons for **opt-out**:

intellectual property rights

privacy

might jeopardise project's main objective

Research and Innovation

European Commission

European Open Data (and data driven science) supported by the **European Open Science Cloud**

EUROPEAN OPEN SCIENCE CLOUD
BRINGING TOGETHER CURRENT AND FUTURE DATA INFRASTRUCTURES

A trusted, open environment for sharing scientific data

Open and seamless services to analyse and reuse research data

Linking data

Connecting across borders and scientific disciplines

Connecting scientists globally

Long term and sustainable

Improving science

EOSC is part of Europe´s ambition to **support the transition to Open Science** and make the most of **data-driven science***.*

- **Strongly stated need:**
  it's cost-effective, and privacy & IPR-conscious

- Virtual environment **for all European researchers** to store, manage, analyse and re-use data

- **Federation of existing and emerging** data infrastructures

- **Added value:**
  scale, data-driven science, inter-disciplinary,
  data - to - knowledge - to - innovation

- **Attendance**
  - 78 key stakeholders from <u>all categories</u>, full house, long stand-by list, web-streamed.
  - 19 MS + AC officials, invited via ERAC SWG OSI.
  - 13 research funders, 15 national scientific infrastructures.
  - Overall: 23 MS +AC represented.
  - Incredible online coverage
    - 1790 web-stream connections, average play 54 minutes.
    - #EOSCSummit trending topic in Belgium on Twitter (683.000 impressions).

- **Proceedings and outcomes**
  - Chaired by DG Robert-Jan Smits, Speech by Commissioner Moedas.
  - 5 sessions and one panel managed by 10 top experts.
  - Clara Eugenia García (ERAC SWG OSI) chaired the session on governance.
  - Several commitments made on 4 key areas of implementation to the EOSC + HPC.
  - Strong reference to GO-Fair initiative (DE-NL) for implementation of FAIR data principles.
  - Conclusions currently under revision by Chairs and Rapporteurs discussion/commitments at the Summit.

- **Proposed way forward**
  - 'EOSC Declaration' based on the outcomes of the Summit by mid-July, open for endorsement by stakeholders by end September.
  - EOSC Stakeholder Forum will meet annually, stakeholder-driven, similar to Summit but wider.
  - EOSC Governance Board – Commission proposal of procedure and mandate in the Autumn.
  - Horizon 2020 WP 2018-20 to provide direct support for the kay priorities identified.

- **Timeline for engagement with Members States (medium-term)**
  - July: AOB at RWP (TBC).
  - First half of September: informal workshop with MS in context of EOSCpilot project.
  - Autumn: EOSC Declaration becomes first draft of 'Roadmap for governance and funding'
  - COM(2016)0178, EP Report 2016/2145(INI), Council Conclusions 9526/16.

| Q2 2017 | Q3 2017 | Q4 2017 | 2018 |

EOSC Summit

Statement of endorsement:
- Interim Governance Board – Design Phase
- Implementation needs
- Functions of EOSC

Delivering:
- Basic Portal/Interface
- Roadmap
- Interim Governance Board – 1st Phase
- WP2018-20

Definition of
- Business Model
- Governance Model

Input/Feedback

| EOSC Pilot | HLEG EOSC | HLEG FAIR | ERAC OSI | OSPP |

Open Science Policy Platform

May 2016 Competitiveness Council:

"NOTES **the establishment of the Open Science Policy Platform** by the Commission, which aims at **supporting the further development of the European Open Science policy and promoting the uptake by stakeholders of best practices**,

including issues such as adapting reward and evaluation systems, alternative models for open access publishing and management of research data (including archiving), **altmetrics,** guiding principles for optimal reuse of research data, development and use of standards, and other aspects of open science such as fostering research integrity and developing citizen science";

Commissioner Moedas will inform the Council biannually on advances of the Platform (which consist of 25 Key stakeholders-European Branch Organisations)

The mandate

EC advisory body, providing recommendations; Stakeholder-driven mechanism helping further develop and implement open science policy

➢ policy formulation: help identify the issues to be addressed and provide recommendations on policy actions required

➢ policy implementation: review best practices, draw policy guidelines and foster uptake by stakeholders

High-level representatives of European branch stakeholders; Balance between different stakeholders

The membership

25 members from eight stakeholder groups:

✓ **Universities:** EUA, LERU, CEASAR, ACEU, YERUN

✓ **Research Organisations:** EARTO, EMBO, EU-LIFE, ENoLL

✓ **Academies/Learned Societies:** EPS, EUCHEMS, YEAR, GYA

✓ **Funding Organisations:** Science Europe

✓ **Citizen Science Organisations:** ECSA

✓ **Publishers:** STM, OASPA

✓ **Open Science intermediaries:** RDA, F1000, OpenAIRE, EGI, DARIAH, GEANT, Business Europe

✓ **Libraries:** LIBER

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Timeline

Kick-off: Brussels, 19 September 2016

2nd meeting: Brussels, 9 December 2016

3rd meeting: Berlin, 20 March 2017

                   +WS at int. OS conference

4th meeting: Tallinn, 11 (13) October 2017

5th meeting: Brussels, () December 2017

Workplan

	Dec'16	March'17	October'17	Dec'17
Citizen Science	*	**	(***)	
EOSC	*	**	(***)	
Open Access	*	**	(***)	
Altmetrics		*	**	(***)
Rewards			*	**
Skills			*	**
Integrity			*	**
FAIR data				*

Open Science Monitor
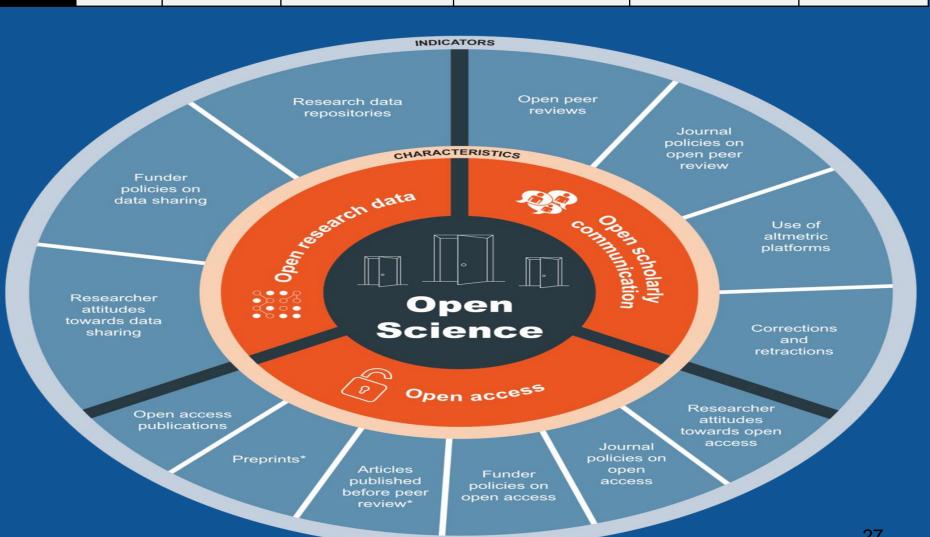
http://ec.europa.eu/research/openscience/monitor/

RESEARCH & INNOVATION
Open Science

Home | **Open Access** | **European Open Science Cloud** | **Open Science Policy Platform** | **Expert Group on Altmetric** | **Open science monitor**

European

Home	About	Open access	Open research data	Open scholarly communication	Citizen science	Drivers and barriers
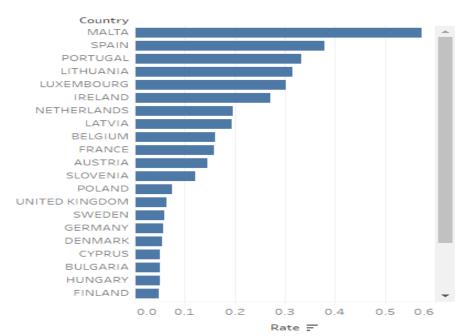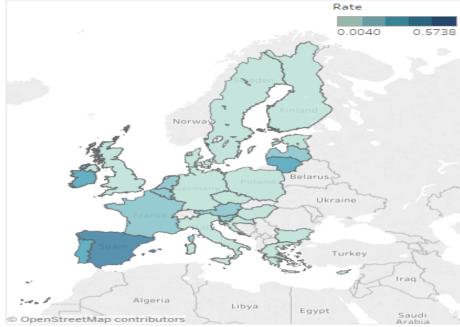
Is OS here to stay?
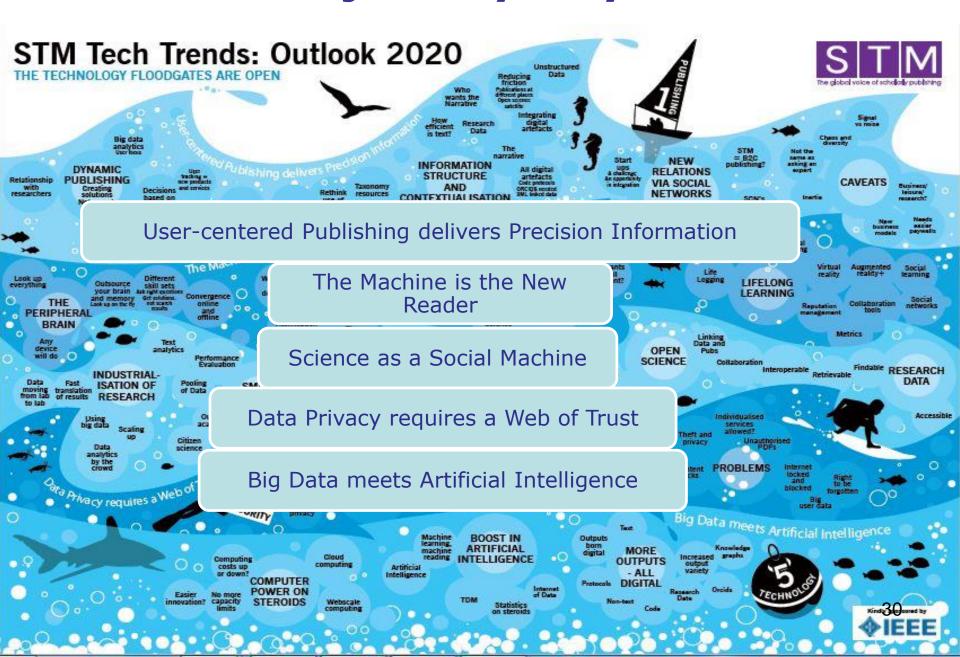
If you want to go fast, go alone.
If you want to go far, go together
(African saying)

Such a long journey ahead of us
(South African writer, A. Brink)

Indeed – the journey only started

STM Tech Trends: Outlook 2020 — THE TECHNOLOGY FLOODGATES ARE OPEN

- User-centered Publishing delivers Precision Information
- The Machine is the New Reader
- Science as a Social Machine
- Data Privacy requires a Web of Trust
- Big Data meets Artificial Intelligence

A 4th paradigm of data-intensive science?

- Data explosion only starting (internet of everything)
- Due to data abundance: Greater role for inductive, not only hypothesis driven science: "Here's the evidence, now what is the hypothesis?"

	Manual	**Computational**
Deductive	2nd paradigm: theoretical (*Newton*)	3rd paradigm: computational (*Von Neumann*)
Inductive	1st paradigm: empirical (*Bacon*)	4th paradigm: data-intensive (*Venter, DNA sequencing*)

Independent QUALITY assurance will always be at the core of science

The Journal of Alternative Facts

We Have All the Best Climates, Really, They're Great

Iwas A. Scientistonce *

* and now I have all my research approved by a public relations office

Abstract

The research presented in this paper is really the best research that you will ever see. We have methods, the best methods, and we used them to study climate. As you may already know, the Earth, led by America, has all the best climates. In this paper we refute prior work by out-of-touch scientists who insist that the climate is changing – why would it change, when it's so great already? It is not getting warmer. In fact, our findings show that you were cold at least one day last year. Our (really fantastic) data also reveals that America has all the best CO_2 levels, really great levels. In our discussion, we reveal that there is no reason to believe a bunch of scientists who spent all their time learning and studying "facts" instead of being out in the real world making jobs. Our alternative facts definitively prove that scientists are losers. Finally, we had peer reviews, by all the best people, our people, because politicians know the most about science, the very best things about science.

Keywords: climate, "data", "facts", #makeclimategreatagain, "science"

3:
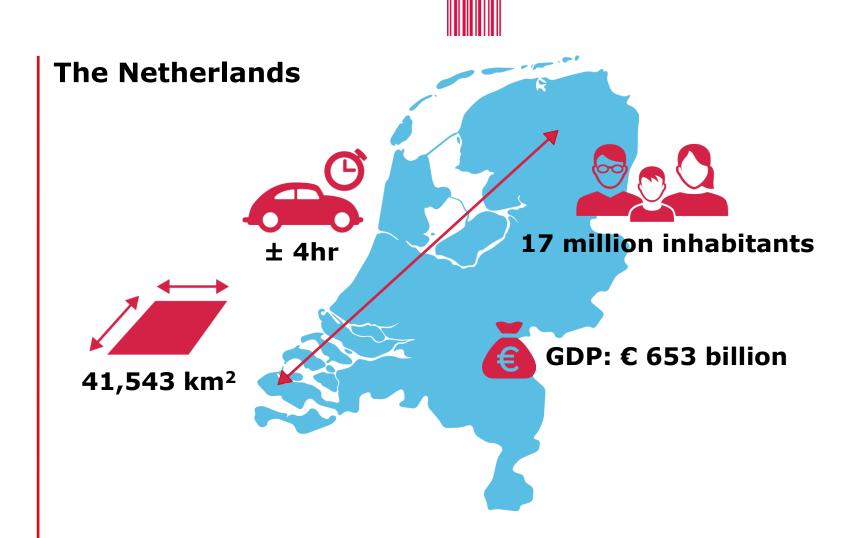
Let's make it work for you and Europe together

Thank you
Muchas gracias
Muito obrigado

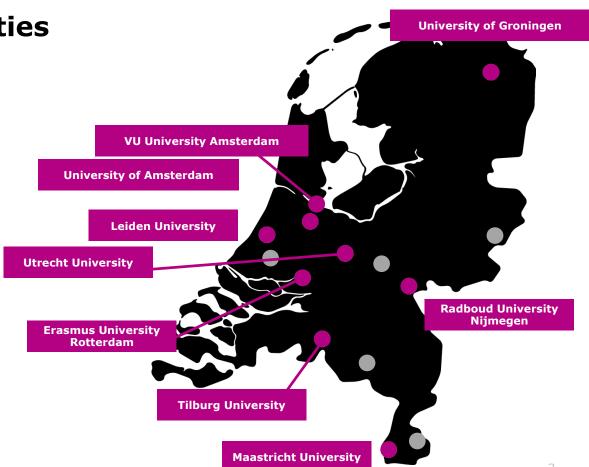More information at
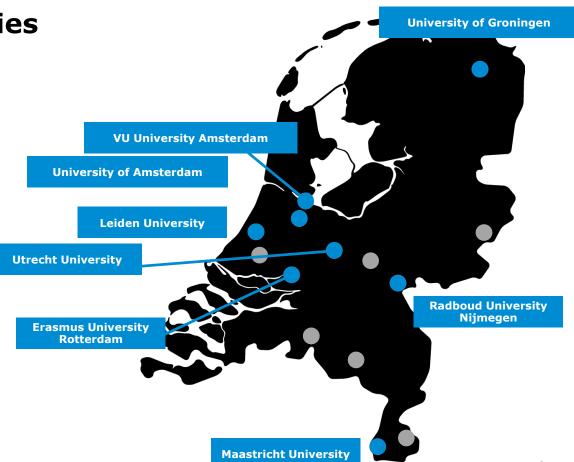
http://ec.europa.eu/research/openscience

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Open Access and the Impact on Higher Education

Robert van der Vooren

22 June 2017.

The Netherlands

± 4hr

41,543 km²

17 million inhabitants

GDP: € 653 billion

The Dutch universities

Comprehensive

University of Groningen

VU University Amsterdam

University of Amsterdam

Leiden University

Utrecht University

Erasmus University Rotterdam

Radboud University Nijmegen

Tilburg University

Maastricht University

3

The Dutch universities

Comprehensive

Medical, liaison with UMC

University of Groningen

VU University Amsterdam

University of Amsterdam

Leiden University

Utrecht University

Radboud University Nijmegen

Erasmus University Rotterdam

Maastricht University

4

The Dutch universities

- Comprehensive
- Medical, liaison with UMC
- Technology
- Lifelong learning

University of Twente

Wageningen University

Delft University of Technology

Eindhoven University of Technology

Open University of the Netherlands

5

Dutch ambition for open access

100% gold open access by 2020

*Going for gold
requires a properly thought-out and well organised
negotiation.*

Focus on the biggest publishers…

Royal Society of Chemistry

Wiley

Elsevier

Brill

Springer

Ars Aequi

American Chemical Society

Kluwer

Proquest

Sage

Oxford University Press

BOOM
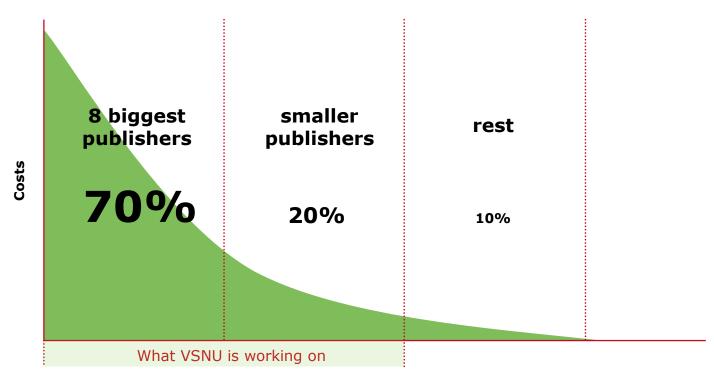
Taylor & Francis

IOS Press

Amsterdam University Press
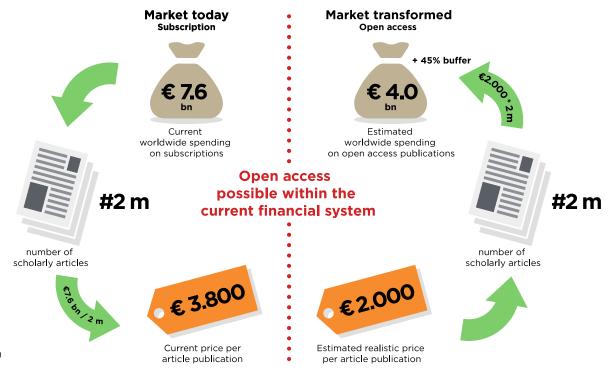
… because the top 8 covers 70% of the market

8 biggest publishers

70%

smaller publishers

20%

rest

10%

Costs

What VSNU is working on

Number of publishers

Know the facts about the worldwide publishing market

Market today
Subscription

€ 7.6 bn

Current worldwide spending on subscriptions

#2 m

number of scholarly articles

€ 3.800

Current price per article publication

€7.6 bn / 2 m

Open access possible within the current financial system

Market transformed
Open access

+ 45% buffer

€ 4.0 bn

Estimated worldwide spending on open access publications

#2 m

number of scholarly articles

€ 2.000

Estimated realistic price per article publication

€2.000 * 2 m

Based on Schimmer, R., Geschuhn, K. K., & Vogler, A. (2015). Disrupting the subscription journals' business model for the necessary large-scale transformation to open access. doi:10.17617/1.3.

We convey our negotiation results in numbers

For example: "*the Elsevier deal provides us with 30% open access in 2018…*"

…meaning:

*subscribers have reading rights to all journals
in the Elsevier collection/package*

*the annual contribution of Dutch affiliated authors
in these journals is 6.000 articles*

*30% * 6.000 = 1.800 articles are 'pre-paid' for open access in 2018
for Dutch authors, not only subscribers*

Big deals as vehicle for open access negotiations

Sage

two years
partial OA deal
200 articles (20% of output)
selected titles

November 2014

Springer

two years
OA big deal
on 1,700 titles
excluded: BioMed
Central, Springer Open

July 2015

Big deals as vehicle for open access negotiations

Wiley

four years
OA big deal
in 1,400 titles

Taylor & Francis

two years
OA big deal
in 1,580 titles

December 2015

May 2016

- Oxford University Press
- Kluwer

February 2016

July 2016

Elsevier

three years
partial OA deal
3,600 articles
(10-20-30% of output)
selected titles

ACS
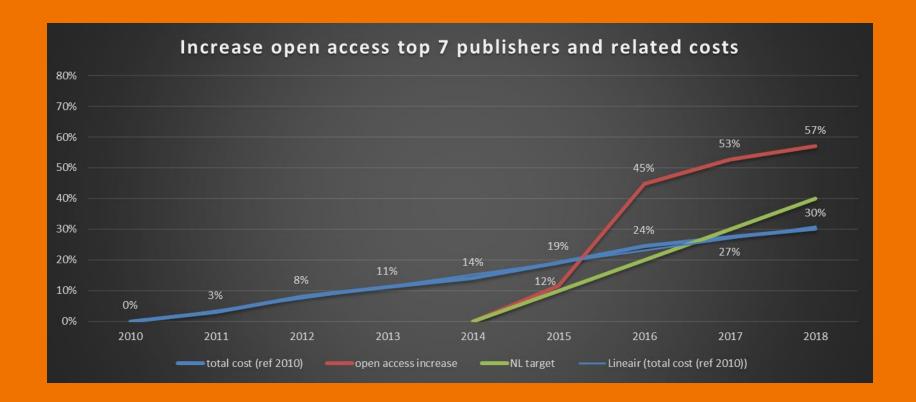
four years
OA big deal
in 53 titles

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Increase open access top 7 publishers and related costs
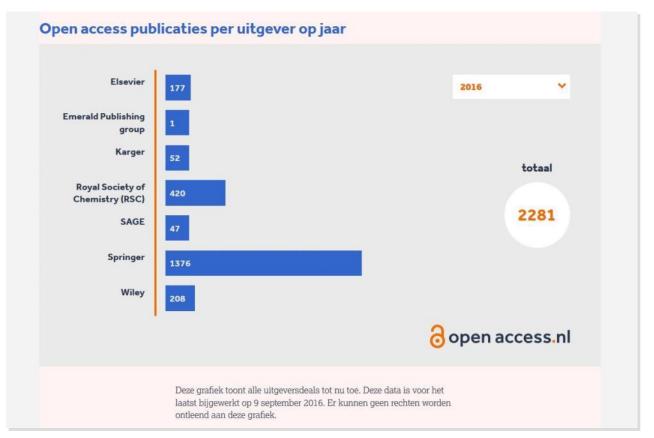
For compliance we need to monitor progress

Open access publicaties per uitgever op jaar

Publisher	Count
Elsevier	177
Emerald Publishing group	1
Karger	52
Royal Society of Chemistry (RSC)	420
SAGE	47
Springer	1376
Wiley	208

2016

totaal

2281

open access.nl

Deze grafiek toont alle uitgeversdeals tot nu toe. Deze data is voor het laatst bijgewerkt op 9 september 2016. Er kunnen geen rechten worden ontleend aan deze grafiek.

4 success factors have proved key

1. Form one block as basis for your bargaining model

2. Send a powerful delegation to the negotiations

3. Remain loyal to your principles

4. Clear political support and international outreach are crucial

The next step: open access needs to move worldwide

The Dutch universities aim to share their experiences

International collaboration is helpful.

Join us at www.OA2020.org

More information?

- Read our E-zine about the Dutch approach
- Go to www.vsnu.nl/openaccess
- Sign up for our Open Access newsletter
- Contact us!

Thank you for your attention!

Open Science in Germany 2017

Open Science Seminar

Crue Universidades Españolas / Conselho de Reitores das Universidades Portuguesas

Date: June 22nd 2017
Place: Universidad Carlos III de Madrid - Campus Puerta de Toledo, Ronda de Toledo, 1 28005 Madrid Spain

Wolfram Horstmann

1. LANDSCAPE OF RESEARCH IN GERMANY

2. OPEN ACCESS

3. OPEN SCIENCE

1. LANDSCAPE OF RESEARCH IN GERMANY
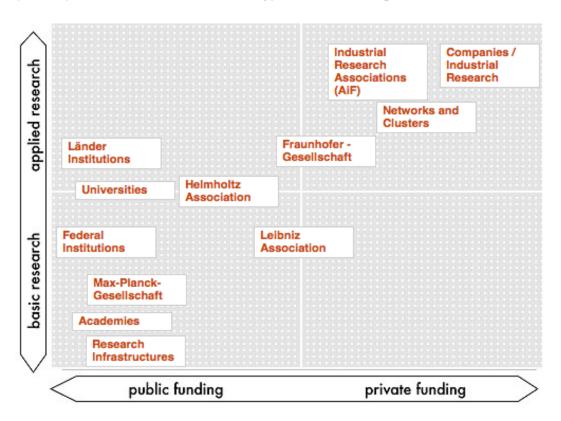
2. OPEN ACCESS

3. OPEN SCIENCE

Research Performing Organisations

Find out about Germany's different types of research institutions: universities, universities of applied sciences, non-university research institutes, companies and federal as well as state (Länder) institutions. Profiles of each type of research organisation can be found here.

applied research

basic research

Industrial Research Associations (AiF)

Companies / Industrial Research

Networks and Clusters

Länder Institutions

Fraunhofer - Gesellschaft

Universities

Helmholtz Association

Federal Institutions

Leibniz Association

Max-Planck-Gesellschaft

Academies

Research Infrastructures

public funding   private funding

Facts & Figures

© DAAD/Volker Lannert

Biotechnology has become the basis and driving factor behind many applications in medicine, the food and feed industry and chemical industry.

Science and research in Germany are characterised by an excellent infrastructure, a wide variety of disciplines, well-equipped research facilities and competent staff.

Germany offers various forms of research locations: universities, non-university institutes, companies and institutions run by federal or state (Länder) authorities. All in all, there are **nearly 1,000 public and publicly funded institutions of science, research and development in Germany**. They are joined by a large number of research and development (R&D) centres run by companies.

In selected fields or regions, these industrial and academic institutions pool their research and development activities in networks and clusters to work more efficiently and benefit from a higher level of knowledge in order to foster technology transfer and innovation. Furthermore, cooperation at European as well as international level has become an essential dimension of science and research in Germany.

Key Facts

Almost **1,000 public and publicly funded institutions** for science, research and development, approx. 450 research and innovation networks and clusters

604,000 staff in R&D including over 350,000 R&D researchers

German higher education institutions maintain over **34,000 international collaborative partnerships** with roughly 5,400 universities and research institutions in more than 150 countries.

Gross domestic expenditure on R&D (GERD): **84.5 billion euros** (2014)
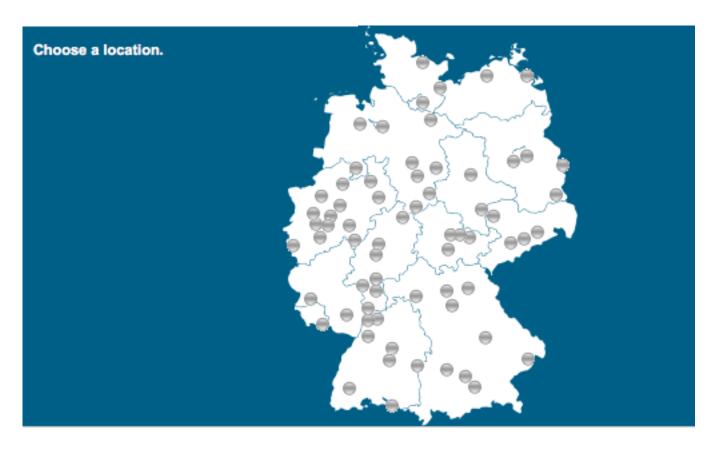
Alliance of Science Organisations in Germany

The Alliance of Science Organisations in Germany is a union of the most important German research organisations. It issues statements relating to research policy and funding and the structural development of the German research system.

Members of the Alliance include the Alexander von Humboldt Foundation, the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation), the Fraunhofer-Gesellschaft, the German Academic Exchange Service, the German Council of Science and Humanities (Wissenschaftsrat), the German National Academy of Sciences Leopoldina, the German Rectors' Conference, the Helmholtz Association of German Research Centres, the Leibniz Association, and the Max Planck Society.

HRK

Higher Education Institutions in Figures

The German Rectors' Conference (HRK) is the voluntary association of state (public) and state-recognised universities and other higher education institutions in Germany. The HRK currently has 268 member institutions. Around 94 % of all students in Germany are matriculated at these institutions.

Higher Education Institutions in Germany

Higher education institutions in total	**399** [1]
Universities	121 [1]
Universities of applied sciences (FH)	220 [1]
Colleges of art and music	58 [1]

Higher education institutions by type of funding	
State (public) higher education institutions	238 [1]
Non-state, state-recognised higher education institutions	161 [1]
of which private	121 [1]
of which church maintained	40 [1]

www.hrk.de   **2015**

Studies

Degree programmes in total by type of degree	**17,731** [1]
Diplom (Uni)	144 [1]
Magister	44 [1]
Staatsexamen	1,677 [1]
Diplom (FH)	59 [1]
Bachelor's	7,817 [1]
Master's	8,833 [1]
Other degrees	157 [1]

Degree programmes by type of higher education institution	
Universities	11,207 [1]
Universities of applied sciences (FH)	5,413 [1]
Colleges of art and music	1,111 [1]

Students

Students in total	**2.7m** [2]
Women	1.29 [2]
Men	1.41m [2]
Proportion of foreign students	11.8 % [2]

Students by type of higher education institution	
Universities	1.73m [2]
Universities of applied sciences (FH)	929,784 [2]
Colleges of art and music	35,230 [2]

First-year students in total in the academic year	**500,666** [2]
Women	250,665 [2]
Men	250,001 [2]
Proportion of first-year students among the same-age population	57.3 % [3]

Graduates

Degrees gained in total	**436,420** [4]
Women	221,587 [4]
Men	214,833 [4]
Proportion of foreign graduates	9.5 % [4]

Graduates by type of degree	**408,713** [4]
Diplom (Uni) and equivalent degrees	64,054 [4]
Lehramt (teaching degree incl. BA and MA)	41,519 [4]
Diplom (FH)	17,381 [4]
Bachelor's	207,401 [4]
Master's	78,358 [4]

Doctorates	**27,707** [4]
Women	12,256 [4]
Men	15,451 [4]

Habilitations in total	**1,567** [4]
Women	429 [4]
Men	1,138 [4]

Staff

Staff in total at higher education institutions	**662,076** [4]
Academic, research and artistic staff combined	**369,847** [4]
Full-time staff	233,259 [4]
- Professors	45,013 [4]
- Lecturers and assistants	3,693 [4]
- Academic, research and artistic staff	174,701 [4]
- Teaching staff for special purposes	9,852 [4]
Temporary, part-time staff	136,588 [4]
Administrative, technical and other staff combined	**292,229** [4]

Finances

Expenditure

Higher education institutions in total (incl. university hospitals)	44.9bn euros [5]
Universities (excl. university hospitals)	18.7bn euros [5]
University hospitals	20.4bn euros [5]
Universities of applied sciences (FH)	5.2bn euros [5]
Colleges of art and music	0.6bn euros [5]
Current expenditure on higher education institutions	40.2bn euros [5]
Investment expenditure on higher education institutions	4.7bn euros [5]

Income

Higher education institutions in total	44.9bn euros [5]
Administrative income of higher education institutions (excl. university hospitals)	2.1bn euros [5]
Administrative income of hospitals	13.9bn euros [5]
Core funding for higher education institutions	22.1bn euros [5]
Third-party funding for higher education institutions	6.7bn euros [5]

Sources of third-party funding

German Research Foundation (DFG)	2.2bn euros [5]
Federal Government	1.7bn euros [5]
Länder	0.2bn euros [5]
European Union	0.6bn euros [5]
Foundations and similar sources	0.4bn euros [5]
Business, industry and similar sources	1.3bn euros [5]

Core funding

Core funding Federal States	21.8bn euros [6]
Core funding Federal Government	4.9bn euros [6]
Core funding: Expenditure of higher education institutions as a proportion of GDP	1.0 % [6]
Current expenditure (core funding) per student	7,300 euros [5]
Current expenditure (core funding) by average length of studies per graduate	30,000 euros [5]

Internationality

Foreign students in Germany in total	**218,848** [7]
of which from: China	28,381 [7]
Russia	11,126 [7]
India	9,372 [7]
Austria	9,305 [7]
German students abroad in total	**135,960** [5]
of which in: Austria	32,192 [5]
Netherlands	25,019 [5]
Switzerland	14,352 [5]
United Kingdom	13,720 [5]
United States	9,819 [5]
France	6,400 [5]

International Comparisons

First-year student rate for the same-age population*

Russia	69 % [8]
United Kingdom	67 % [8]
Germany	53 % [8]
Japan	52 % [8]
Italy	47 % [8]
France	41 % [8]

Spending on tertiary sector education institutions as a percentage of GDP

Canada	3.0 % [9]
United States	2.7 % [9]
Japan	1.6 % [9]
France	1.5 % [9]
Russia	1.4 % [9]
Germany	1.3 % [9]
United Kingdom	1.2 % [9]
Italy	1.0 % [9]

Research

Total higher education institution expenditure on R+D

	14.0bn euros [5]

Third-party funds

Third-party income of higher education institutions in total	6.7bn euros [5]

Third-party funds by type of higher education institution

Universities (excl. university hospitals)	4.6bn euros [5]
University hospitals	1.6bn euros [5]
Universities of applied sciences (FH)	0.4bn euros [5]

Third-party funds per professor

Higher education institutions in total	167,500 euros [5]
Universities (incl. university hospitals)	285,900 euros [5]
Universities (excl. university hospitals)	243,700 euros [5]
Universities of applied sciences (FH)	27,100 euros [5]
Colleges of art and music	15,100 euros [5]

Source and Period under Review

[1] German Rectors' Conference (HRK): Higher Education Compass, Summer Semester 2015

[2] Federal Statistical Office: Winter Semester 2012/2013, (provisional)

[3] Federal Statistical Office: as per November 2014

[4] Federal Statistical Office: 2013

[5] Federal Statistical Office: 2012

[6] Federal Statistical Office: 2013, (provisional)

[7] Federal Statistical Office: Winter Semester 2013/2014

[8] OECD: Education at a Glance: 2012

[9] OECD: Education at a Glance: 2011

* Limited comparability due to the differing degrees of academisation in the individual vocational training programmes.

Current Policy Context

Excellence Strategy of Federal and State Givernments

Exzellenzstrategie des Bundes und der Länder

Die Exzellenzstrategie des Bundes und der Länder

Mit der „Exzellenzstrategie" soll der Wissenschaftsstandort Deutschland nachhaltig gestärkt und seine internationale Wettbewerbsfähigkeit weiter verbessert werden. Damit soll die im Rahmen der 2005 initiierten Exzellenzinitiative erfolgreich begonnene Weiterentwicklung der deutschen Universitäten durch die Förderung wissenschaftlicher Spitzenleistungen, Profilbildung und Kooperationen im Wissenschaftssystem fortgeführt werden.

Current Policy Context
Federal Government sets „Digital Agenda"

Current Policy Context
Federal Government sets „Digital Agenda"

31.05.2017 | **PRESSEMITTEILUNG: 055/2017**

Deutschland und die Niederlande für rasches Handeln bei der European Open Science Cloud

Anlässlich des gestrigen Wettbewerbsfähigkeitsrates in Brüssel haben

Deutschland und

der European Op

Dynamik des digi

handeln", so die S

Dekker (Niederlar

Ratssitzung vorst

GO FAIR

Schütte und Dekker schlagen vor, als erfolgversprechenden Ansatz zur Errichtung der EOSC die Initiative GO FAIR zu fördern. GO FAIR ist völlig offen für alle und kann zu einer breiten Einbindung der gesamten europäischen Wissenschaft beitragen. Sie forderten die anderen Mitgliedstaaten auf, sich dieser Initiative anzuschließen und richteten die eindringliche Bitte an die Europäische Kommission

Current Policy Context
Council for Information Infrastructure addresses Research Data

Current Policy Context

Alliance of Science Organisations in Germany new digital strategy

- „Driving Digital Transformation in Research"
  - 8 action lines for 2018-2022
    1. Scholarly publication system
    2. Digital tools, software and services
    3. Digital collections and text-corpora
    4. Federated IT-infrastructure
    5. Digital learning, teaching and networking
    6. Digital qualifications for staff
    7. Law for research in the digital age
    8. Research conduct Scholarly practices

Personal Roles

Director / University Librarian.
Göttingen State and University Library
University of Göttingen

Professional Appointments

-   German Rectors Conference
    -   Commission "Digital Infrastructures"

-   Alliance of German Research Organisations
    -   Focus-Initiative "Digital Information"

More Details: http://tinyurl.com/wh-sub

Professor, Institute for Library and Information
Science, Humboldt University, Berlin

1. GERMAN RESEARCH LANDSCAPE

2. OPEN ACCESS

3. OPEN SCIENCE

Pretext to OA in Germany

- Active since c. 2000 (Berlin Declaratin 2003)
- Many 'green' repository intitiatives
  – Contribution to Europe: e.g. DRIVER/OpenAIRE
  – Contribution to Global: e.g. COAR
- DFG Programme for APCs since c. 2010
- OA2020 since c. 2016
- DEAL Project (see below)
  – a part but not all of the German OA story

Projekt DEAL

Bundesweite Lizenzierung von Angeboten großer Wissenschaftsverlage

Search...

about DEAL

The goal of Project DEAL is to conclude **nationwide licensing agreements** for the entire portfolio of electronic journals (E-journals) from major academic publishers from the 2017 licence year. The intention is also to bring about **significant change** to the status quo in relation to negotiations, **content** and **pricing** in the process. The effects of a consortium agreement at the national level should relieve the financial burden on individual institutions and bring wide-scale, lasting improvements in access to scholarly literature for academics. An open access component is also planned.

The potential exists for several hundred institutions – such as universities, universities of applied sciences, research institutions, state and regional libraries – to participate in such a DEAL licence.

Project structure

Project group

- Antje Kellersohn, University Library Freiburg (spokesperson for the project group)
- Bernhard Mittermaier, Central Library FZ Jülich
- Hildegard Schäffler, Bavarian State Library Munich
- Ralf Schimmer, Max Planck Digital Library Munich
- Frank Scholze, KIT Library Karlsruhe (deputy spokesperson for the project group)
- Manfred Walter, University library of HTW Berlin
- + guests and experts

Project staff

- Wiebke Beckmann, University Library Freiburg (communications and publicity)

Commissioned by the Alliance of German Research Organisations

Executed by the German Rectors Conference

Projekt DEAL

Bundesweite Lizenzierung von Angeboten großer Wissenschaftsverlage

Search...

press review

languages

EN

DE

March 2017

[Open access campaigners toughen stance towards publishers (in: Times Higher Education 27.03.2017)](#)

[How Elsevier plans to sabotage Open Access (in: medium.com 25.03.2017)](#)

[German research organisations: Elsevier blocks negotiations on nationwide licences (HRK Press Release 24.03.2017)](#)

[German Universities ready to give up subscription to Elsevier (in: ZME Science 22.03.2017)](#)

[Influential Science German Universities Say No to Elsevier Journal Subscriptions (in: Scientifist 20.03.2017)](#)

[En tysk DEAL? (in: Bibliotekshorisonten 11.03.2017)](#)

August 2014

Data collection from libraries starts
(all letters are addressed to the university rectors)

July 2015

Data collection from libraries finalizes

February 2016

DEAL requests mandate for negoatiation from libraries

April 2016

Public communications start

June 2016

Report on inititializing talks to Elsevier, Springer Nature, Wiley

Announcement of negotiation with Elsevier for License 2017

July 2016

Suggestion to make any extension of exisiting
contracts with Elsevier as late as possible in the year

August 2016

Public statement on requirement of Open Access

... to be continued ...

October 2016

Suggestion to cancel all Elsevier contracts for 2017

December 2016

Report on first offer of Elsevier,
however failing to provide Open Access conditions

Announcement of negotiation break
and unlikelihood to have licenses in 2017

January 2017

Elsevier switches off access to 2017 journals

Situation briefing on emergency plans

Suggestions to cancel any 2018 contracts

February 2017

Elsevier switches on access to 2017 journals

March 2017

Press release about negotiation „blockade" by Elsevier

June 2017

Report on successful starts with Springer Nature and Wiley

1. GERMAN RESEARCH LANDSCAPE

2. OPEN ACCESS

3. OPEN SCIENCE

Pretext to Open Science

- Much wider field than Open Access
  - Addresses digital transformation in research
  - Shift to „intelligent openness"
- Defintions and streams diverse but maturing
  - General claim for openness in research policy
  - Open Source, Open Content, Open Access blend
  - Enabler for „Reproducible Science"
  - Means to make „Negative Results" known
  - Innovative, interdisciplinary, global projects
  - Special reflection of „Data Science"

Massive differentiation of tech and data

http://evolutionofweb.appspot.com/?hl=de

Massive differentiation of tech and data

http://evolutionofweb.appspot.com/?hl=de
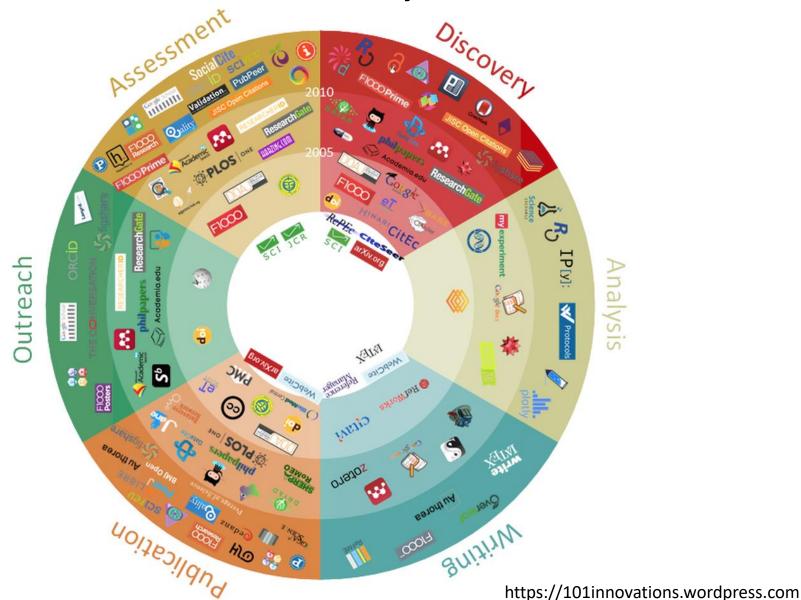
Impacts on Digital Research

- Abundance of connectivity
  - Fostering unhindered collaborative research

- Abundance of data
  - Fostering the rise of data-intensive research

- Abundance of tools
  - Fostering open science and reproducible science
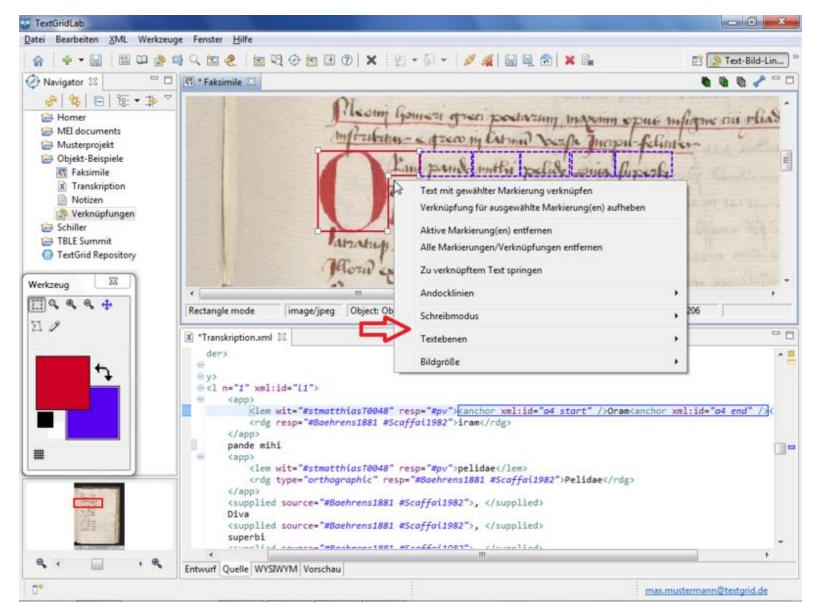
Innovations in Scholarly Communication

Examples of Digital Research

DIGITAL HUMANITIES

From digital imaging to web-corpora

Distant Reading Showcase

## 200 Jahre deutsche Dramen-geschichte auf einen Blick

Rechts im Bild sind die Personennetzwerke von 465 Dramen aus den Jahren 1731–1925. Das Poster ist zum Lesen aus der Ferne geeignet: Man erkennt zum Beispiel, wann die Autoren anfangen, Shakespeare zu lesen: Die Figurennetzwerke explodieren. Die Dramentitel sind abgekürzt (schönes Ratespiel für zwischendurch). Generiert wurde das Poster automatisch mit unserem Superpostertool dramavis.

Sechs AutorInnen

(Bildtafeln: Goethe, Schiller, v. Weißenthurn, Hebbel, Schnitzler, Wedekind)

Netzwerkgröße

Dramen als Small Worlds

Homepage des Projekts

http://lina.digital

Credits

Tieck, DvW, 1800

Schiller, MS, 1800

Kleist, DzK, 1808

Kleist, DH, 1808

Goethe, DEE, 1815
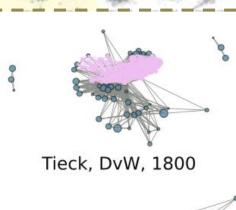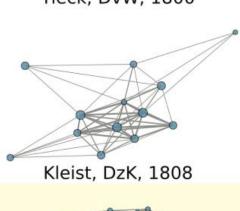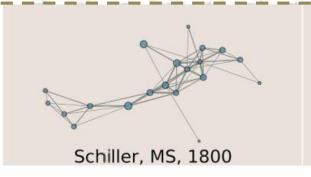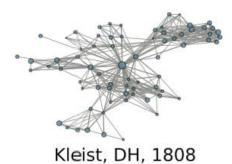
Brentano, DGP, 1815

Digital Humanities

What Is Digital Humanities?

Why define it? Just do it!

SIMON MAHONY

DH is an evolving form of creation that focuses on the point of intersection between traditional humanities topics and looks at them through the lens of the digital.

ROMEENA

The Digital Humanities are awesome! We're seeing increased cross-pollination between fields like writing and science, literature and computers, history and engineering. Plus, there are so many new interactive tools that allow us to (re)discover ideas in a new way!

KIM LACEY

Digital humanities is a field that uses contemporary technology - and imagines and creates new technologies - to learn and teach about culture.

JOAN FRAGASZY TROYANO

http://whatisdigitalhumanities.com

Examples of Digital Research

DIGITAL SCIENCE

Digital Science

Definition:

Digital science means a radical transformation of the nature of science and innovation due to the integration of ICT in the research process and the internet culture of openness and sharing. It is more open, more global and collaborative, more creative, and closer to society. It relies on the use of e-infrastructures, i.e. ICT-based services and tools for data- and computing-intensive research in virtual and collaborative environments.

Digital Science in Horizon 2020 https://ec.europa.eu/digital-single-market/en/news/digital-science-horizon-2020

Do Sciences and Humanities differ?

- Yes
  - Science use experimental and observational data
  - There is more data, specifically numeric
  - Laws allow building models > allow simulation
- No
  - Both use digital methods and encoded data
  - Both try to explain the world
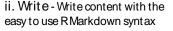
Example: Open Notebook Science

- „Executable Papers" generate papers online

- Reproducible Science is implemented
  - Transparent methods, always open to all
  - Worldwide online collaboration possible

1. Workflow R Markdown is a format for writing reproducible, dynamic reports with R. Use it to embed R code and results into slideshows, pdfs, html documents, Word files and more. To make a report:

i. Open - Open a file that uses the .Rmd extension.

ii. Write - Write content with the easy to use R Markdown syntax

iii. Embed - Embed R code that creates output to include in the report

iv. Render - Replace R code with its output and transform the report into a slideshow, pdf, html or ms Word file.


```
.Rmd
```

```
A report.
A plot:
```

```
A report.
A plot:

```{r}
hist(co2)
```
```

```
A report.
A plot:
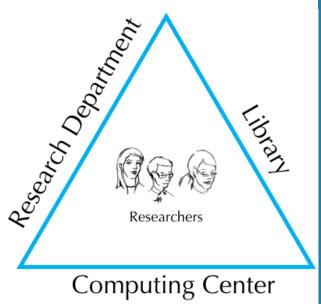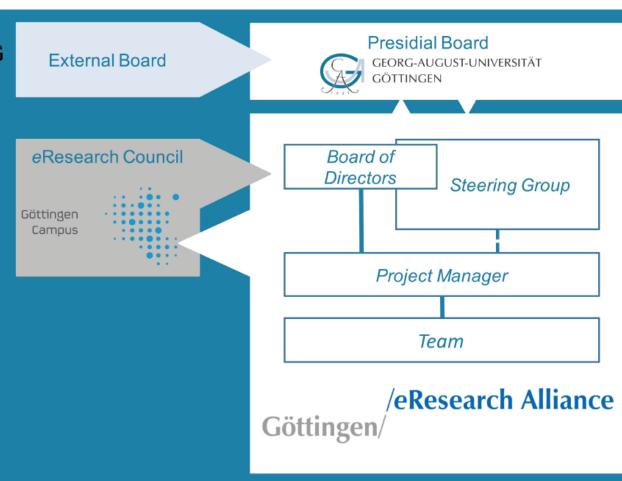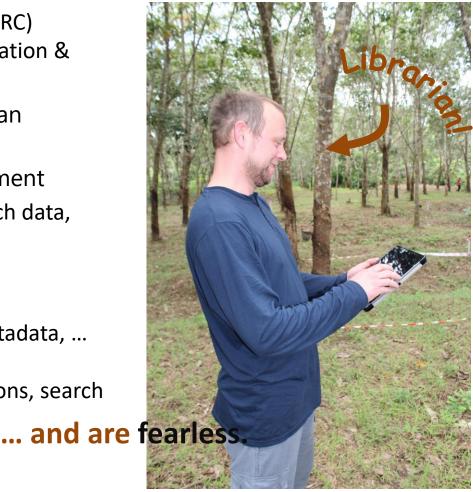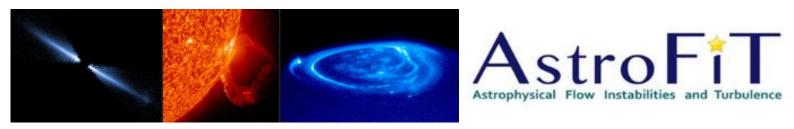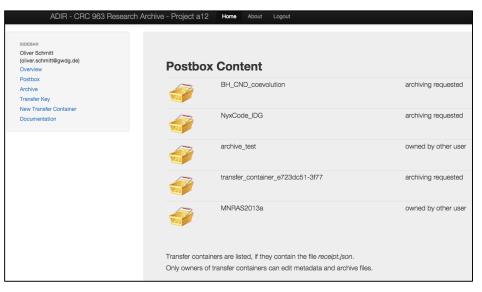
```{r}
hist(co2)
```
```

= A report. A plot: =

PDF TEX LaTeX

Microsoft Word

Reveal.js
ioslides, Beamer

HTML5

Göttingen eResearch Alliance

EXAMPLE FOR LOCAL ACTIVITIES

Cross Campus Cooperation

Steering Group:
- Senior staff SUB & GWDG
- *Research Department*
- *University Medical Center*

The eResearch Council

- Established in June 2015
- 30 members from all faculties and non university research institutes w/ eResearch/e-science expertise
- Objectives:
  - ➢ Feedback on eRA activities
  - ➢ Discuss topics, needs, strategies
  - ➢ Establish working groups
  - ➢ Network (into the faculties)
- Convenes twice a year

Members of the eResearch Council during the kick-off meeting on June 2nd, 2015 at Historische Sternwarte (Göttingen)

Website as central information hub

Areas of activities

Consulting: New proposals

**Data-/IT-concept
for proposal**

Elements

- Storage and backup
- PIDs
- Adaptation of existing solutions
- Policies
- Training

Funders' requirements

- local (Göttingen University)
- National (DFG)
- International (EU)

First Successes

- New funding grants
- Positive feedback of PIs

CRC 990 EFForTS/INF-Project
Role model *embedded data manager*

- Large interdisciplinary research project (CRC) with integrated service project for information & infrastructure (INF)

- 100+ researchers, field work: Indonesian Rainforest

- Lots of different data require management

- Provide an information system for research data, write an Excel transformation script, moderate sharing agreements, …

- „Embedded Data Managers" know:
  IT Basics, data modelling, concepts of metadata, … and how to:
  analyse requirements, moderate discussions, search information, learn new things rapidly …

… and are fearless.

Ecological and Socioeconomic Functions of Tropical Lowland Rainforest Transformation Systems (Sumatra, Indonesia)

Datamanager Timo Gnadt in Indonesia, photo taken by Daniel Kurzawe

CRC 963 ADIR: AstroFIT Data InfRastructure project

- Archiving of simulation and experimental data of 16 sub-projets
- Direct data transfer from parallel or lab computers
- Allocation of Persistent Identifiers and annotation of metadata in web browser

Example: CRC 1002
Electronic laboratory notekeeping

CRC 1190: Compartmental Gates and Contact Sites in Cells

- With eRA consulting
- Re-using electronic lab books and infrastructure from CRC 1002

Repository for publication

- Current activities on journal publication management (GRO) using LibreCat

- Intended to use also for the publication of data
  - Issues w/ research data

- Currently testing Dataverse as alternative

- Bring in dep. of digital library (services)

- Establish project structure until end of Jan. 2017

Research facilities information portal

- Two primary stakeholders
  - Researchers: Find out about existing research facilities, to
    - Make use for their own project
    - Take into consideration for new funding proposal
  - University administration
    - Increase efficiency
    - Avoid conflict in funding proposals
- Currently for equipment > 150 k€ only
- Interest from researchers for small devices, too (e.g., GPS, 3D-scanner, …)

Example device data set:
- **Type**
- **Manufacturer**
- **Model**
- Context
- Specs
- Institute
- **Contact**
- Documentation
- User Policy
- Web Page
- Additional Information

Campus laboratories

- Support for the research infrastructure
- Combine methodological research, pools of research facilities, resources or databases, education, training of a transversal research-oriented unit.

Open Science Göttingen Meet-up

- Initiated in December 2016
- Focus on Open Science topics: research data, publishing, peer review, research integrity, etc.
- Junior researchers, librarians, research management, HE didactics, from UGOE, Max Planck Institutes etc.
- Outreach primarily via graduate schools' mailing lists

Work mode
- Quarterly Meet-ups with short presentations & group discussions
- Working groups (monthly): Teaching Open Science, HackyHour

50

THANK YOU

Open Science: Benefits and challenges for the European university sector

Dr Lidia Borrell-Damian,
EUA Director for Research and Innovation

Open Science Seminar

Madrid, 22 June 2017

Open Science: concept and implications for science and society

- **Principles: transparency and openness** of results, of research data, of evaluations and, more generally, of the scientific approach

- **Objectives:**
  - ✓ Encourage **collaborations** and avoid the duplication of effort, i.e. **increased efficiency**

  - ✓ Promote the **validation** of results

  - ✓ Facilitate the **exploitation** of research results (improved quality of results)

  - ✓ Make science **more accessible** and facilitate **the participation of citizens** and of civil society (increased transparency of the scientific approach and access to results)

  - ✓ Promote **scientific integrity**

  - ✓ Accelerate **innovation** (faster commercialisation = quicker growth)

...2...

Open Science: How?

- Modify the publication process:
  - ✓ New publication models: journals, articles, different forms of scientific communication (e.g. science blogs, social media), open access…
  - ✓ New economic models: who pays and who buys? Role of the public power, role of private entities

- Evolution of scientific practices
  - ✓ Collaborative work, access to computerised databases and research data, search and analysis
  - ✓ Participative sciences (e.g. citizens science)
  - ✓ Strengthening scientific integrity
  - ✓ Re-thinking university-business cooperation

- Evolution in assessment methods (journal impact factor?, 'altmetrics', open peer-review, …)

- Implementation of technical infrastructures: platforms, networks, data centres – project EOSC (European Open Science Cloud), standards, interoperability

…2…

For new models to emerge, engagement at all levels is needed

Involvement of researchers

They are at the core of the evolution in research methods, evaluation methods and of people

They are key in the balance of power with publishers; must be involved in negotiations

Involvement of institutions

Major role in the evaluation of researchers, recruitment, promotions, organisation of research teams, and in financing

EUA in Open Science

- EUA, as a major university stakeholder, has a key role at multiple levels:

  o **Policy-level**: from national to European-level

  o **Economic and financial level**: regaining 'scientific sovereignty'

  o **University-level**: supporting universities' digital policies

EUA Organisation and Activities 2017

- **EC - Open Science Policy Platform (OSPP):**

  - **Represented by Professor Norbert Lossau, Goettingen University.**

  - **Active in OA Group and Citizens Science Group**

- **Expert Group on Science 2.0/Open Science currently addressing**

  - **Open Access**

  - **Monitoring implementation of institutional OA policies**

  - **Resarch assessment in career progression tracks**

  - **Research Data Management**

  - **Text and Data mining**

  - **Citizens Science**

- **Open Science in Doctoral Education (with EUA-CDE)**

- **High-Level Goup on Big Deals adressing:**

  - **Big Deal Negotiations with major publishers**

  - **Dialogue with Publishers**

EUA OPEN SCIENCE

EUA ROADMAP ON OPEN ACCESS TO RESEARCH PUBLICATIONS

February 2016

Objectives:

• Promoting and supporting adoption of OA policies, infrastructures and initiatives by European universities, in dialogue with stakeholders

• Considering alternative and sustainable OA business models

• Addressing intellectual property rights and copyright policies

• Encouraging, and supporting the establishment of comprehensive standards for institutional OA policies concerning research publications and teaching materials

Selected Results

2015/16 EUA Annual Survey
on
Institutional Open Access and Research Data Policies

Questionnaire on Open Access to research publications
Key Characteristics

Focused on the degree of implementation of institutional Open Access policies for research publications and research data

The respondents

- **169 universities** from **33 European countries**

  November 2015-January 2016

Response rate

- 22% of EUA universities

- Responses show progress on universities participation in the EUA Open Access survey, but comparisons across countries and generalisations to the European-level are limited.

- Response rate of the 2016/17 Survey 51% (closing date 31 March 2017)

Institutional policies on Open Access

Share of institutions which have a policy of Open Access (OA) to research publications

- 3.6%
- 17.2%
- 23.7%
- 55.6%

Legend:
- ■ Yes
- ■ My institution is in the process of developing an Open Access policy (and expects to have one in place within 12 months)
- ■ My institution is planning to develop an Open Access policy (but does not expect to have a policy in place within 12 months)
- ■ My institution is not planning to develop an Open Access policy

Number of respondents: 169/169

Key elements of institutional OA policies

Percentage of universities

0%　10%　20%　30%　40%　50%　60%　70%

Encouragement policy, recommending researchers to deposit their publications in an institutional/shared repository (i.e., absence of a mandate making self-archiving compulsory) — **64.1%**

Mandate making it compulsory for researchers to deposit their research publications in an institutional/shared repository on acceptance for publication (green route/green open access), and to make the full text open-access within a specified time period — **31.4%**

Financial support from the institution for researchers to publish their papers open access — **24.4%**

Other — **14,5%**

Mandate making it compulsory for researchers to deposit their research publications in an institutional/shared repository on acceptance for publication (green route/green open access), with this requirement being linked to internal performance evaluation — **11.5%**

Mandate requiring publication in open access (gold route/gold open access) — **2.6%**

Number of respondents: 156/163. Question only applicable to institutions who replied "Yes", "In the process of developing and OA policy" or "Planning to develop an OA policy" to Q1.

Institutional repositories

- 2%
- 9%
- 12%
- 77%

■ Yes, my institution has an institutional repository
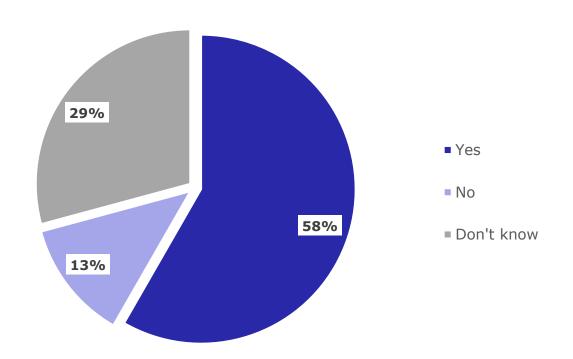
■ Yes, my institution participates in a shared repository

■ No

■ Don't know

Number of respondents: 169/169

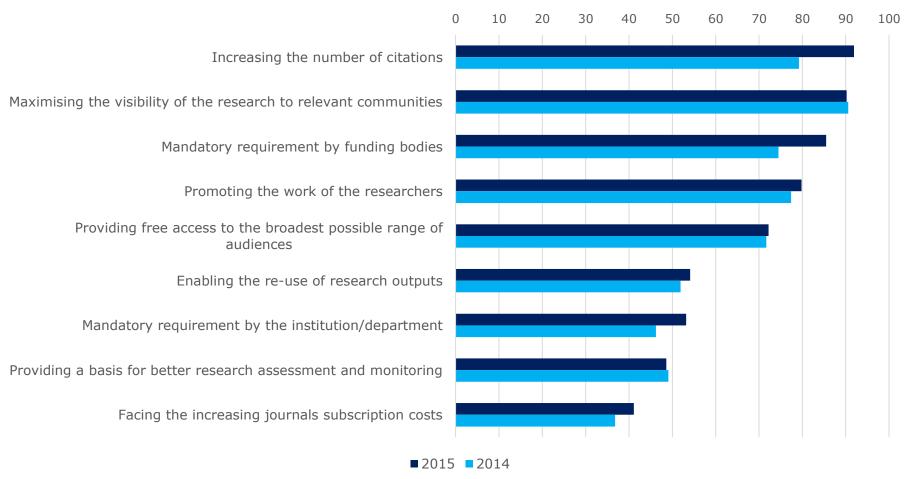# Increase in deposit rate in the repository since OA policy adoption

Number of respondents: 93/94. Question only applicable to institutions who replied "Yes" to Q1.

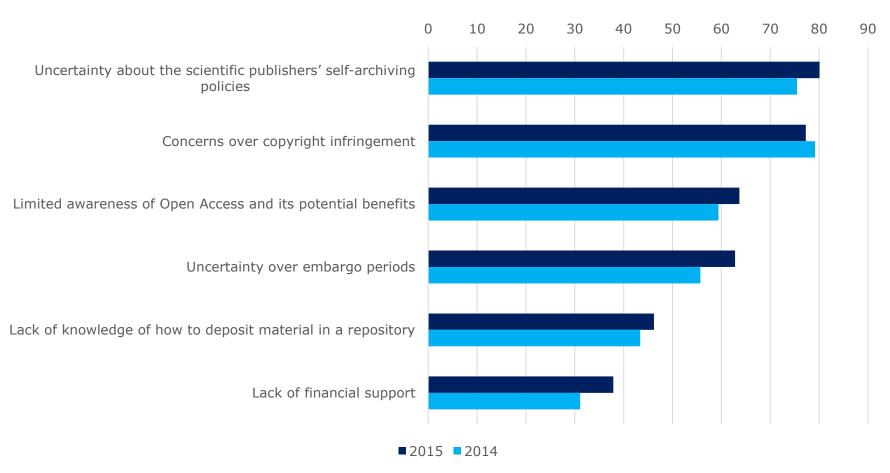# Factors encouraging researchers to self-archive publications in the repository

Note: Elements perceived as "very important" and "important"
Number of respondents: between 169/168 (2015) / between 105 and 106/106 (2014)

…13…

Barriers to Open Access

Note: Barriers perceived as "very frequent" and "frequent"

Number of respondents: between 165 and 168/169 (2015); between 104 and 106/106 (2014)

Key results
Open Access to research publications

- Almost **80%** of institutions had an **institutional policy** on Open Access to research publication or was actively developing one
    - Main element: *encouragement* or *recommendation*
    - 24.4% of institutions provided financial support to researchers

- 88% of institutions had an institutional or shared **repository**
- Deposit rates in repositories increased in 60% of institutions, but difficult to gather data
- Actions needed to **increase self-archiving**:
    - increase the number of citations
    - maximise the visibility of research
    - existence of a mandate from the funding bodies
- **Researchers' concerns** on self-archiving:
    - Uncertainty about publishers' policies
    - Concerns over copyright infringements

Key results
Open Access to research publications

- **Awareness** of the scientific publishers' policies on Open Access was assessed as "very good" or "good" for **librarians by 88%** of institutions, but only so for **54%** of the **institutional leadership, and for 32% of researchers**

  Similar pattern for OA rules in H2020 and Open Research Data Pilot

- **Actions** needed at national and European-levels
  - Developing additional incentives for researchers
  - Guidelines on linking, sharing and re-using OA content

Existence of institutional guidelines on OA to research data

- Yes, formal guidelines
- Yes, informal guidelines (guidelines not formalised, but apparent in the institutional practices)
- No
- Don't know

3%
11%
14%
72%

Number of respondents: 169/169

Key results
Open Access to research data

- About 25% of institutions have formal or informal guidelines

  - *Research data management*

  - *Recommendations*

- Reasons for the absence of guidelines/policies

  - Examples: novel topic; priority to OA to publications; no mandate from funders; no national-level policy; lack of awareness; legal concerns

- Barriers for OA to research data:

  - Uncertainty

  - Complex area (technical, legal)

  - Concerns over costs

  - Reduced awareness

Summary
EUA OA Survey 2015-2016

- European universities are increasingly adopting **OA to research publications** (policies, repositories)
  - Difficult to gather reliable data at institutional level -> difficult to assess progress
  - Inclusion of OA in assessment exercises is less developed
  - Concerns over publishers' policies on OA, legal infringements still persist
  - Need to continue raising awareness, especially amongst researchers

- **Open Access to research data** not yet as mature as OA to publications
  - Institutions are addressing research data management, developing guidelines and other activities
  - Complex area, concerns over legal infringements
  - Lack of information on best/good practices (e.g. TDM)

Concluding Remarks

- **EUA** is now a **fully recognized stakeholder** in the field of Open Science at EU level

- It has **regular dialogue** with the **European Commission** and **relevant networks** (MPDL, Sparc Europe, LERU, CESAER, LIBER, Science Europe, etc.)

- EUA is committed to working towards a system that seeks to achieve a **balance of realistic costs and benefits** shared between all stakeholders, including commercial publishers and researchers, considering that scientists have simultaneously the critical roles of content providers and peer reviewers of research publications.

- EUA is also **committed towards Open Access** and to work towards an **updated system of research assessment** that promotes the value of the research outcomes on their own right.

…20…

EUA Expert Group on Open Science

Jean-Pierre Finance (Chair)
Attila Péterfalvi
Bernard Rentier
David Lawrence
Daniel Wyler
Eero Hyvönen
Eloy Rodrigues
Gerard Meijer
Inge Van Nieuwerburgh
Jaap Winter
John Fitzgerald
Lidia Borrell-Damian
Marek Niezgódka
Marta Aymerich
Mogens Sandfær
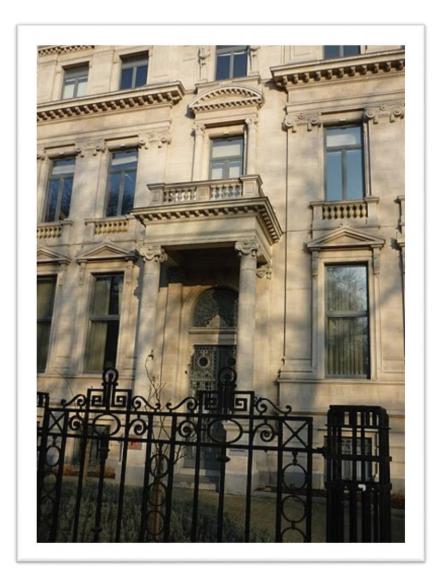Norbert Lossau
Peter Moczo
Petr Dvorak
Stephen Pinfield
Torbjørn Digernes
Ulrike Felt

...21...

Thank you for your attention !

lidia.borrell-damian@eua.be

Open Science Seminar

Academic Presses and Open Science

in Portugal

(Madrid, 22nd June 2017)

Delfim Leão

Director of Coimbra University Press – IUC

University Presses and other Scholarly Publishers

"Let's be clear about it: a **university press is a publisher**. We do not print university newspapers, we are not the university's press office, we do not operate a print shop.

We are publishers, and we do all the things that other publishers do: we acquire, read and select manuscripts or articles, we edit and proofread them, we design covers and lay out, have them printed or produced, and we promote, distribute and sell them.

Some of us **publish books**, others are into **journals**; most of us **still use paper**, but many of us also **publish in various electronic ways**."

Association of European University Presses

APEES

(Associação Portuguesa de Editoras do Ensino Superior)

Portuguese Association of Higher Education Presses

APEES – Associates

Edições Universidade Fernando Pessoa

Editora da Universidade Aberta

Editora da Universidade Autónoma de Lisboa [EdiUAL]

Editora da Universidade de Trás-os-Monte se Alto Douro [UTAD]

Editora do Politécnico do Porto

Imprensa da Universidade de Coimbra

Imprensa de Ciências Sociais [Instituto de Ciências Sociais – UL]
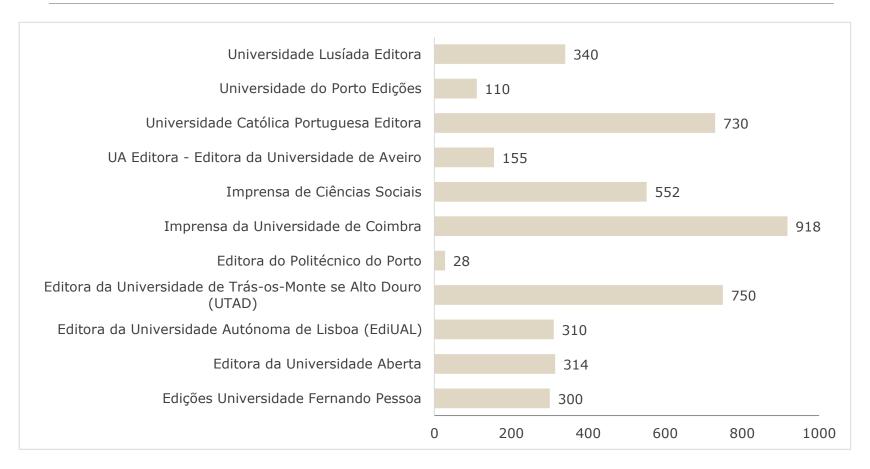
UA Editora - Editora da Universidade de Aveiro

Universidade Católica Portuguesa Editora
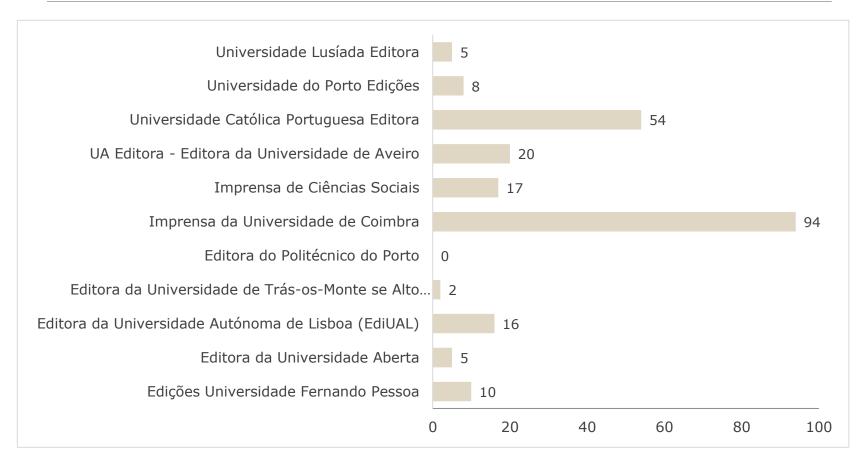
Universidade do Porto Edições

Universidade Lusíada Editora

Published catalogue until 2016*
(books and journals)

Publisher	Count
Universidade Lusíada Editora	340
Universidade do Porto Edições	110
Universidade Católica Portuguesa Editora	730
UA Editora - Editora da Universidade de Aveiro	155
Imprensa de Ciências Sociais	552
Imprensa da Universidade de Coimbra	918
Editora do Politécnico do Porto	28
Editora da Universidade de Trás-os-Monte se Alto Douro (UTAD)	750
Editora da Universidade Autónoma de Lisboa (EdiUAL)	310
Editora da Universidade Aberta	314
Edições Universidade Fernando Pessoa	300

*Coimbra University Press (IUC): founded in 1772, but only publications after 1999 are listed.
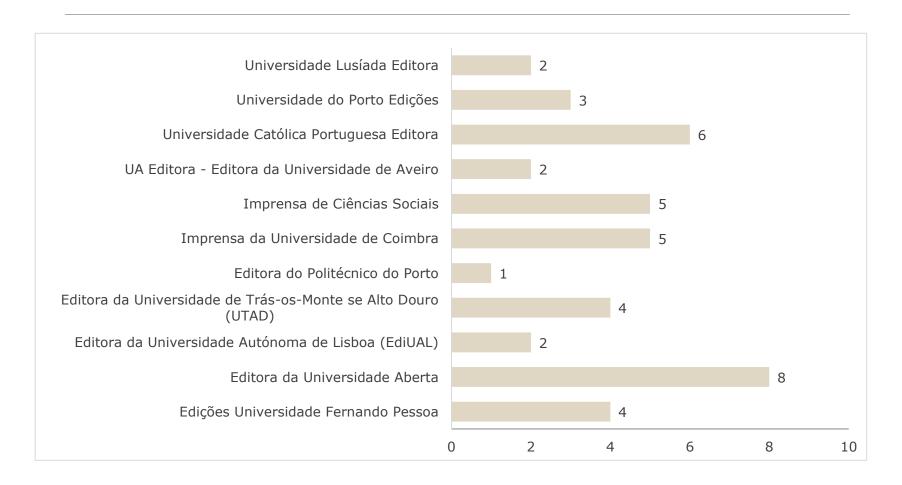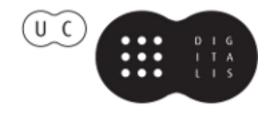
Publications in 2016*
(books and journals)

*Reprints are not taken into account.

Human Resources Involved – 2016

Coimbra University Press and Open Science

▪ **2012**: launching of the project **UC Digitalis** (https://digitalis.uc.pt/)

▪ **2014**: starts the attribution of **DOI** to books, book chapters and articles (**9.006** identifiers assigned until June 2017)

▪ **2017** (June): 22.239 documents available at **UC Digitalis**

▪ **Alma Mater:** 5.322 old documents (**mostly in Open Access**)

▪ **Pombalina**: 4.826 documents (963 books and 3.863 book chapters)

210 **books in Open Access**

▪ **Impactum**: 12.091 **articles in Open Access**

N.B. Pombalina and **Impactum** contents **entirely available through B-On.**

Work in Progress

- **Expansion of digital identifiers**
  - Universalization of the use of DOI and ORCID

- **International indexing**

- **Pombalina**
  - Almost 200 books indexed at Web of Science (success rate of ca. 95%)
  - Ca. 500 books in the indexing process

- **Impactum**
  - Almost 30 journals prepared for indexing at 8 different indexes

OPERAS: Open Access in the European Research Area through Scholarly Communication

IUC at the 'Core Group' of the pan-European consortium OPERAS

▪ Greek National Documentation Centre – EKT (GR)

▪ Max Weber Foundation – MWS (DE)

▪ Open Access Publishing in European Networks – OAPEN (NL)

▪ OpenEdition (FR)

▪ The Institute of Literary Research of the Polish Academy of Sciences –

IBL PAN (PL)

▪ **UC Digitalis/Coimbra University Press (PT)**

▪ UCL Press (UK)

Open Science Seminar

Academic Presses and Open Science
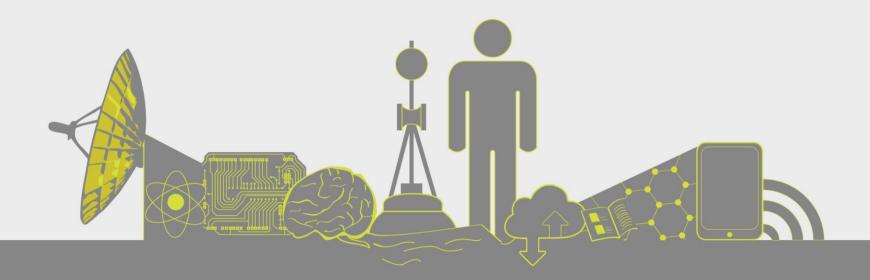## in Portugal

Delfim Leão | leo@fl.uc.pt

Director of Coimbra University Press – IUC

Perspectives from the state administration on open science

National Research Data Infrastructures

Universidad Carlos III, Madrid, June 22nd 2017

Fundação para a Ciência e a Tecnologia (FCT)

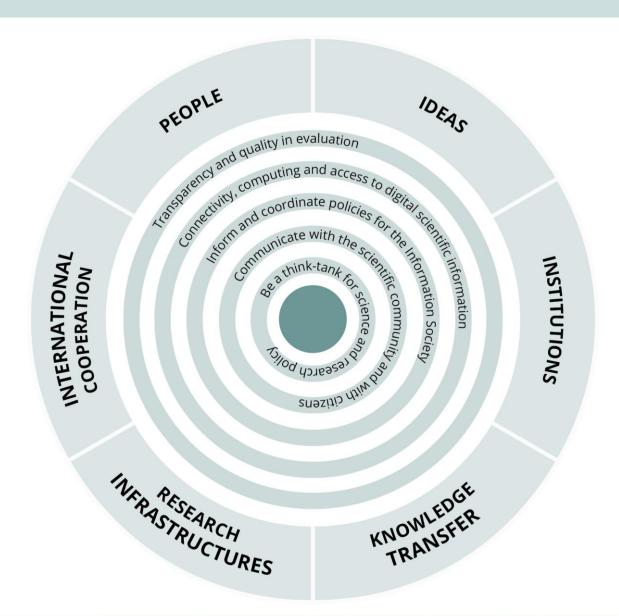**Fundação para a Ciência e a Tecnologia** (FCT)
is the Portuguese national funding agency for science and research.

FCT is a **publicly-funded government agency**, under the responsibility of the Ministry for Science, Technology and Higher Education.

FCT's vision

- To establish Portugal as a **global reference for research and innovation**
- To ensure knowledge generated by scientific research **underpins social and economic development**

FCT supports the **whole spectrum of Portugal's science base**

PEOPLE
IDEAS
INSTITUTIONS
KNOWLEDGE TRANSFER
RESEARCH INFRASTRUCTURES
INTERNATIONAL COOPERATION

Transparency and quality in evaluation
Connectivity, computing and access to digital scientific information
Inform and coordinate policies for the Information Society
Communicate with the scientific community and with citizens
Be a think-tank for science and research policy

FCCN is a branch of FCT – the Foundation for Science and Technology, the principle objective of which is planning and managing the RCTS – the Science, Technology, and Society Network.

Its services are provided by means of a high-performance network for education and research institutions, thus ensuring communication requirements and advanced digital services for the various user communities from these entities.

Main pillars

CONNECTIVITY	COMPUTING	COLLABORATION	KNOWLEDGGE	SECURITY

40 Research Infrastructures make up the first Portuguese Roadmap

10
Biological and Medical Sciences

5
Environmental Sciences

1
Materials and Analytical Facilities

4
Energy

7
Social Sciences and Humanities

10
Physical Sciences and Engineering

3
E-Infrastructures

Source: Portuguese Roadmap Of Research Infrastructures (2014)

The e-IRG Model

How to build a national research data e-infrastructure ?
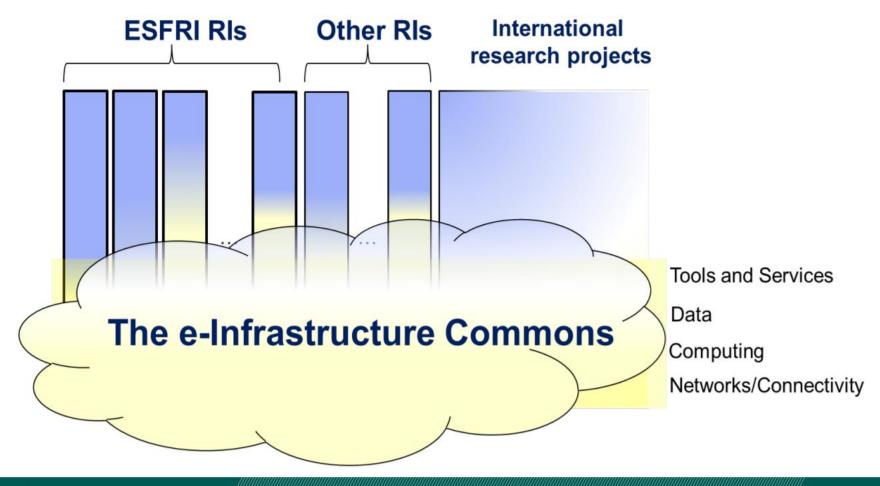
A possible 3-layer approach for a national research data e-infrastructure

Central Functions
- National Coordination
- International Coordination
- Standards and Certification
- Monitoring and Statistics

Access and Preservation Platforms
- Access Data Repositories
- Preservation Data Repositories
- Software tools for data planning, manipulation, validation, etc.
- Teaching and support resources.

e-Infrastructure commons
- Permanent Identifiers & CRIS
- Authentication and Authorization Services
- Storage
- Computing
- Network

How to build a national research data e-infrastructure ?

Next steps:

To create a national working group, a coalition of the willing, to:

- Translate the National Open Science Policy into a national research data e-infrastructure.
- Define a high level deployment plan for initial services.
- Start piloting some services with seed funds, using e-infrastrutures commons services.

- Seek funding opportunities for a national project that kick-starts the national research data e-infrastructure.
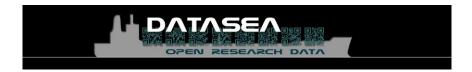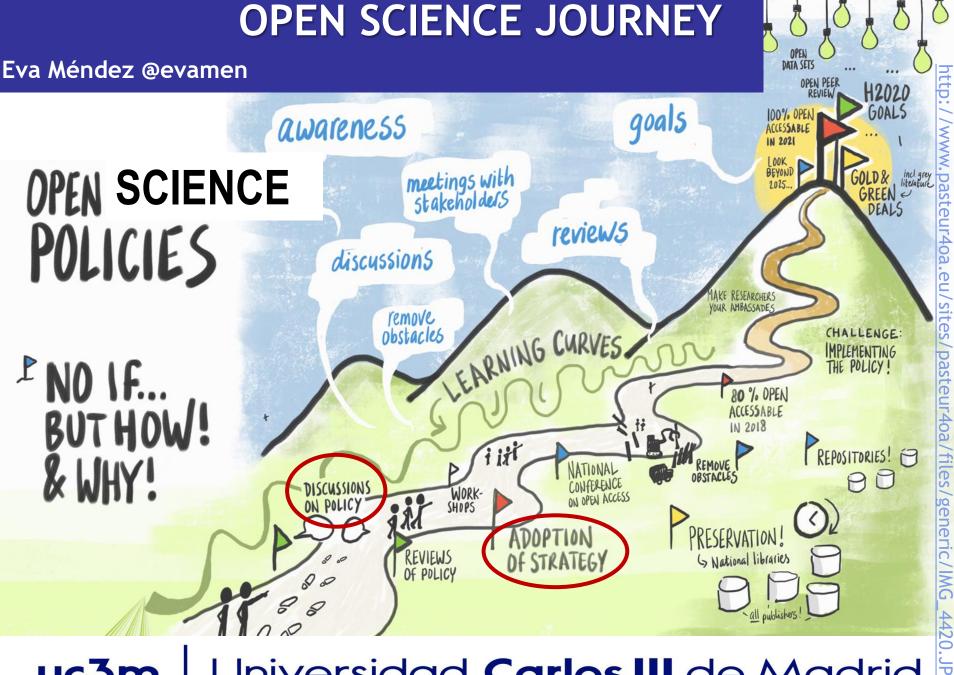
How to build a national research data e-infrastructure ?

Some national models being analyzed

FUNDAÇÃO PARA A CIÊNCIA E A TECNOLOGIA (FCT)

Eva Méndez @evamen
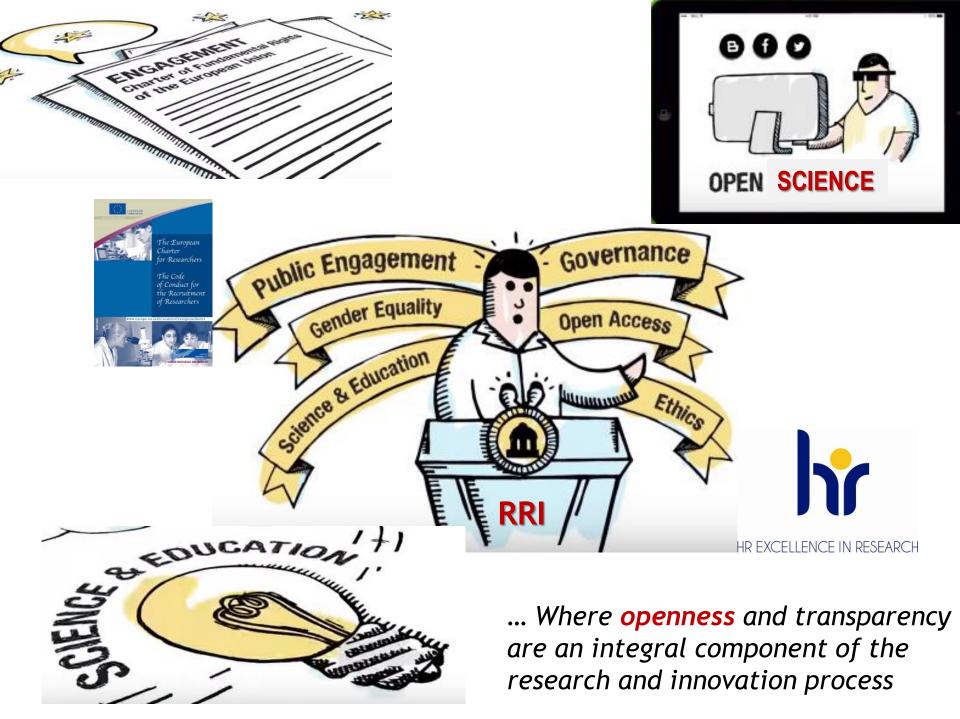
Open Access/ Science @UC3M

- **Where we are...**
  - Policies
  - Infrastructures
- **Where we want to be...**
  - Mandate on OA including ORD
  - Included in the global policy of Openness – Open Science
- **How to make it possible...**
  - Motivators of will
  - Ideas and strategies
  - Challenges

ENGAGEMENT
Charter of Fundamental Rights
of the European Union

OPEN **SCIENCE**

The European
Charter
for Researchers

The Code
of Conduct for
the Recruitment
of Researchers

Public Engagement   Governance

Gender Equality   Open Access

Science & Education   Ethics

RRI

HR EXCELLENCE IN RESEARCH

SCIENCE & EDUCATION

*… Where **openness** and transparency are an integral component of the research and innovation process*

Context

Open Science

THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

3. Mandate on open access to publications

Article 29.2 of the Model Grant Agreement sets out detailed legal requirements on open access to scientific publications: under Horizon 2020, **each beneficiary must ensure open access to all peer-reviewed scientific publications** relating to its results.

Horizon 2020 already mandates open access to **all scientific publications**

BE PART OF THE NEW ERA OF OPEN SCIENCE

reach more people, have greater impact

avoid duplication of efforts

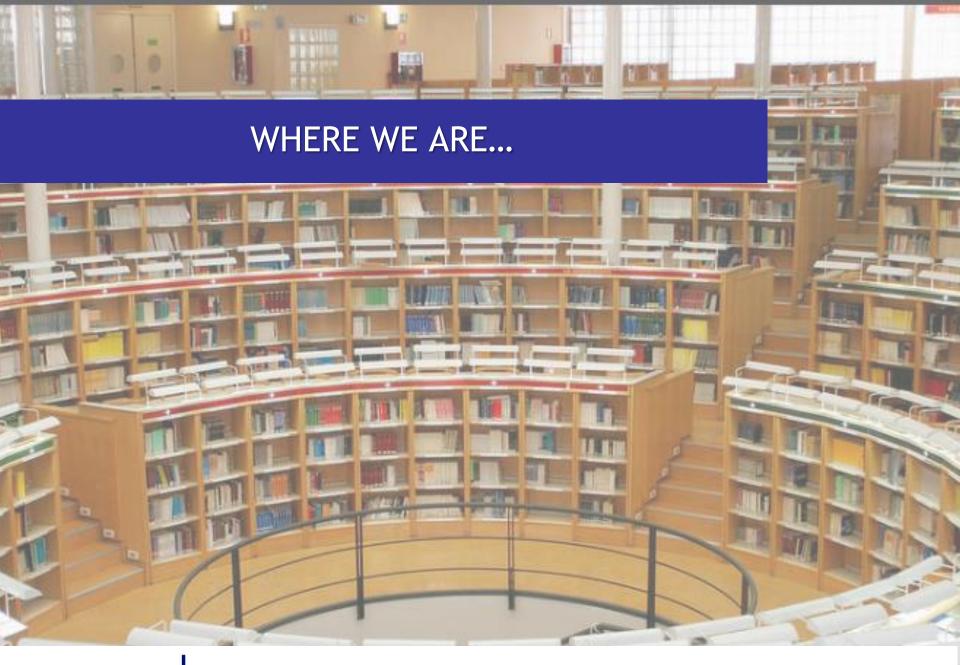preserve data for future researchers

simplify final Horizon 2020 reporting thanks to an up-to-date DMP

From 2017, **research data** is **open by default**, with possibilities to **opt out**

Context

- National:
  - Law 14/2011: *Ley de la Ciencia* (Art. 37)
  - RD 99/2011(Art. 14.5 OA thesis)
  - … Next calls of the R&D National Plan

- Regional
  - Orden 679/2009: OA mandate at regional level
  - *Consorcio Madroño* (Declaration on OA)

- Institucional
  - CRUE (endorse recommendations EUA)
  - UC3M: Policies and New strategic plan (2016-22)

WHERE WE ARE...

uc3m | Universidad **Carlos III** de Madrid

Infrastructures: Institutional repository (green)

Infrastructures: Institutional repository (green)

e-Archivo:

- Aprox. 25% of uc3m papers

[20,75% stimation 2013-2015]

- *OpenAIRE 3.0 compliant (OA, funding)*

- All thesis from 2013 (Doctorate School mandate - RD 99/2011)

- Integration CRIS-e-Archivo (Prize 2013)

- Current incentives:
  - UC3M Research Program
  - Thesis, proceedings, etc.

Infrastructures: Research Data Repository

Portal de Investigación del Consorcio Madroño

Madroño Consorcio
InvestigaM

Madroño Consorcio

Ociencia Datos **BETA**

🔍 Acerca de Guías ▾ Soporte Iniciar Sesión

Repositorio de Datos del Consorcio Madroño

‹
Dataverse Repositorio de Datos UAH

UA
Dataverse Repositorio de Datos UAM

uc3m Universidad Carlos III de Madrid
Dataverse Repositorio de Datos UC3M

UNED
Dataverse Repositorio de Datos UNED
›

Buscar en este dataverse...   🔍 Buscar   Búsqueda Avanzada

☑ 👤 **Dataverses (6)**
☑ 📄 **Datasets (9)**
☐ 📊 Ficheros (81)

Categoría del Dataverse
Organización o Institución (6)

1 a 10 de 15 Resultados   ⇅ Ordenar ▾

Dataverse Repositorio de Datos UAH (biblioteca.uah.es/)
22-dic-2016
Repositorio de Datos de la UAH

Infrastructures: **InvestigaM**

eCiencia
- All scientific publications of Madrid region

PaGoDa
- DMPOnline in Spanish
- Generate DMP

eCienciaDatos
- Collective respository of research data

ESPAÑOL | ENGLISH

Madroño Consorcio

Reunimos recursos, ofrecemos servicios

| Inicio | Acerca de | Recursos electrónicos | Servicios | InvestigaM |

⌂ > InvestigaM

INVESTIGAM

Ciencia abierta

Declaracion Open Access

COAR

SCOAP3

Infrastructures: Expert finder (researchers)

https://researchportal.uc3m.es

And you? What are you going to do?

Introduction video Conference Open Science 4- 5 April 2016, Dutch Presidency EU2016: https://www.youtube.com/watch?v=C9a3Ap3yyak

What are we going to do...

Universidad **Carlos III** de Madrid

Mandate OA/ORD within a global Policy on OS

- Maximize **IMPACT** of UC3M research outcomes

- Measure and **REWARD** openness and reuse of research outcomes

- Improve **VISIBILITY**: gathering, managing and showing a permanent registry of scientific production of the University

Why?: Commitment and compliance

Plan Estratégico 2016 - 2022

2.2.2. Mandato Institucional de Acceso Abierto

- Establecer una política institucional de Ciencia Abierta que fomente no sólo el acceso abierto a las publicaciones realiza-
das **Institutional Policy of Open Science (publications and data)**
lad
artículo 37 de la Ley de la Ciencia, y por otro, aumentando la visibilidad global de los resultados de investigación y su interoperabilidad. Esta política de mandato institucional ayudará en el proceso de obtención del sello europeo de *Human Resources Excellence in Research* dentro de la estrategia HRS4R *(Human Resources Strategy for Researchers* (HRS4R) ya que una de las acciones recogidas en el plan de acción HRS4R es la necesidad de aprobación de un mandato institucional de acceso abierto.

Estrategias:

2.2.1. Creación de un Site de Información de la Investigación UC3M

- Crear un equipo de Open Knowledge (formada por personal de diferentes áreas modelo UTEID (Unidad de Tecnología Educativa e Innovación Docente)).

- Publicar un Portal de investigación de la Universidad Carlos III de Madrid que proporcione acceso a la información científica y de investigación, con el fin de dar respuesta de manera rápida, dinámica y actualizada a estas dos preguntas:

  - ¿Quién investiga en un tema concreto?

  - y ¿Qué investiga un departamento/instituto/grupo concreto?

- Visualizar la ciencia realizada en nuestra universidad es el objetivo final para entrelazar, compartir y descubrir todos estos datos en Internet.

Why?: Commitment and compliance

THE HUMAN RESOURCES STRATEGY
FOR RESEARCHERS HRS4R – UC3M

ACTION PLAN

HR EXCELLENCE IN RESEARCH

Area 1: Ethical and professional issues

C&C	Action	Ref	Responsible Party	Units in charge[1]	Time Frame[2]	Indicators
1,2,3, 7,8,23, 31	Code of Good Practices in Research	E1	Vice-President for Scientific Policy	**Research Service**, General Secretariat, Human Resources Service & Organisation	Q2 2018	Approval & dissemination
1,2	Protocol for requesting Report to UC3M Research Ethics Committee	E2	Vice-President for Scientific Policy	Research Service	Q4 2016	Approval & dissemination
1,2,3	Operating Regulations for UC3M Ethics Committee in Research	E3	Vice-President for Scientific Policy	**Research Service**, General Secretariat, Human Resources Service & Organisation	Q1 2018	Approval & dissemination
4, 5, 18	Hosting Protocol for Visiting Researchers	E4	Vice-President for International Relations and Cooperation	**International Relations Service,** Research Service, Human Resources Service & Organisation	Q1 2017	Approval & dissemination. Satisfaction questionnaire
4, 5, 18	Hosting Protocol for Faculty	E5	Vice-President for Faculty	**Human Resources Service & Organisation**, Research Service, International Relations Service	Q4 2017	Approval & dissemination
8, 31	Open Access Institutional Policy	E6	Vice-President for Strategy and Digital Education	**Library,** Research Service	Q1 2017	Approval & dissemination
11	Laying the foundations for incentives for Faculty members for 2018 and 2020	E7	Vice-President for Faculty	**Human Resources Service & Organisation**, Support for teaching and degree administration Center Postgraduate Studies & Doctoral School, Research Service, Library	Q4 2016	Development, publication, dissemination & implementation
10, 24, 27	UC3M II Gender Equality Plan	E8	Vice-President for Students, Social Responsibility and Equality	Equality Unit	Q4 2016	Approval & dissemination

UC3M Eva

Motivators of will...

SEDUCTION!!

Strategies and Ideas…

- Maintain/improve eInfrastructures (repository-CRIS, Expert Finder, etc.) → **VISIBILITY**

- Reduce barriers and create incentives (economic) → **MOTIVATION**

- Foster the credibility and efficiency o the Open Science: *responsible research (RRI)* → **EDUCATION**

Strategies and Ideas... ALLIANCES

- International: YERUN (Young European Research University Network)
- National: REBIUN
- Regional: Madroño
- Bi-national: OpenScienceIBERIA → → →

Let's do it together!

Iberia

Towards RDA Iberia

Objectives:

◦ To make an introduction of the RD management in the EU Open Science Framework

◦ To show-up our research/ers in Spain and Portugal and analyze some research data issues from different perspectives, in different disciplines

◦ To establish an open debate around RD management, sharing, curation... between our researchers and other stakeholders

◦ To analyze other national and regional RDA initiatives in order to inspire RDA Iberia (benchmarking and reflections)

Maredata. Red Española sobre Datos de Investigación en Abierto. (CSO2015-71867-REDT)
CURATORe (CSO2013-46754-R)
financiados por Ministerio de Economía y Competitividad (España).

Strategies and Ideas...

- Embrance international/EU policies (**ALIGMENT**)
- Infrastructures!! (**COOPERATE**)
- Include Open Research Data in the institutional policy (**MANDATE**)
- Reward with economic incentives (internal rewarding system) (**MONEY**)
- MOTIVATION: Datathons, Prices (**RANKING**)
- ECR → deposit the underlying datasets of the thesis, master papers, etc. (**NEW BEHAVIOURS**)

"The best is enemy of the good"

Challenges!!!

- **Change** the mindset of the researchers
  Darling, we need to talk!!
- **Education** → training ECR and PI come along!
- Strategic **alignment** internal policies (GLOBAL, OPEN, DIGITAL) → Ex. MOOCs & OPEN SCIENCE
- **Convince** & **Confidence**!! (Demonstrate the **impact** of the **Open**ness)

Thank you!!

Prof. Dr. Eva Méndez

emendez@bib.uc3m.es

@evamen

Summary

1. Commitment & Compliance
2. Tools & Processes
3. Opportunities & Threats

OPEN ACCESS

01

Commitment & Compliance

01 **Commitment**

Some key **declarations on open access**:

- ✓ (2002) Budapest Open Access Initiative

- ✓ (2003) Bethesda Statement on Open Access Publishing / Berlin Declaration

- ✓ (2004) CRUE/REBIUN Declaration of support for the Open Access model

- ✓ (2008) Recommendations from the European University Association (EUA) Working Group on Open Access

- ✓ (2008) Open Access Guidelines for researchers funded by the ERC

- ✓ (2016) EUA Road Map on Open Access to Research Publications

- ✓ (2017) European Commission (EC): Guidelines to the Rules on Open Access to Scientific Publications and Open Access to Research Data in Horizon 2020

01 UOC Commitment

WHO

Professors
Researchers
PhD students

(2010) Open Access Institutional Policy at the UOC

O2 repository UOC

WHAT

Research publications
Learning resources
Doctoral & master theses

HOW

If publisher conditions prohibit including the final version, at least deposit the preprint version

WHY

To increase the visibility of the University

WHEN

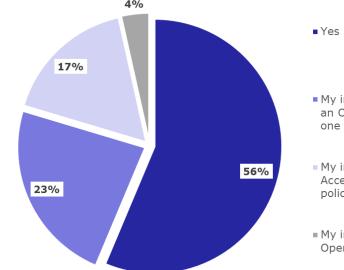After their acceptance for publication and always within 12 months.

01 — **Institutional policies on Open Access**

Share of institutions which have a policy of Open Access (OA) to research publications

The respondents
- ✓ 169 universities from 33 European countries
- ✓ November 2015-January 2016

Response rate
22% of EUA universities

- ■ Yes — 56%
- ■ My institution is in the process of developing an Open Access policy (and expects to have one in place within 12 months) — 23%
- ■ My institution is planning to develop an Open Access policy (but does not expect to have a policy in place within 12 months) — 17%
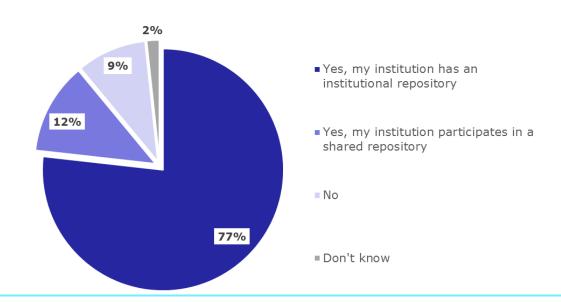- ■ My institution is not planning to develop an Open Access policy — 4%

UOC Universitat Oberta de Catalunya

01

EUA
European University Association

Institutional repositories

77% of EUA universities which responded to the survey have an institutional repository

- Yes, my institution has an institutional repository
- Yes, my institution participates in a shared repository
- No
- Don't know

2%

9%

12%

77%

01 **Compliance**

Around 60% of universities reported having less than 20% of their peer-reviewed publications available in repositories or in open access journals.
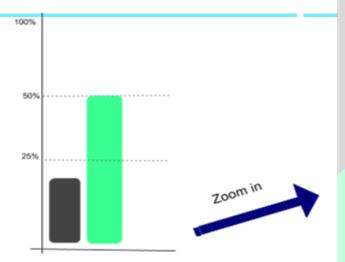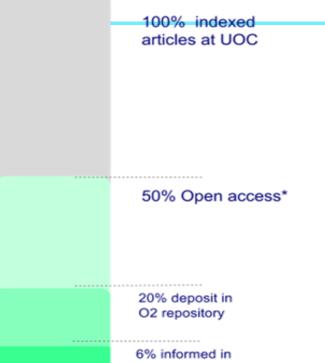
Source: EUA survey

Number of respondents: 96/97. Question only applicable to institutions who replied "Yes" to OA policy.

01 **Compliance at UOC**

Deposit rates

- 100% indexed articles at UOC
- 50% Open access*
- 20% deposit in O2 repository
- 6% informed in GIR

Zoom in

*Source: Bibliometrics

01 Compliance

Ley de la Ciencia, la Tecnología e la Innovación (2011)

Artículo 37 marca la obligación para la comunidad científica de depositar en **acceso abierto** una copia de los **artículos** que se publicarán en el marco de los **proyectos de I+D+i estatales**

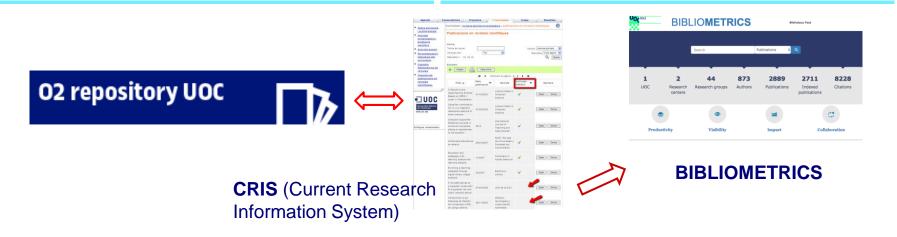**Informe FECYT**: estudio de los proyectos I+D+i 2011 a 2014

Cumplimiento del… **9%**

Universitat Oberta
de Catalunya

02
Tools & Processes

02 Connecting Tools: Interoperability

CRIS (Current Research Information System)

BIBLIOMETRICS

Despite progress, significant obstacles persist with integrating open-access repositories and making them interoperable with CRIS, journal publishing platforms, indexing and abstracting services, and search engines.

Impact and visibility of UOC R&I Open Access Journals

Anàlisi, Artnodes, BiD, Digithum, F&T, IDP and RUSC/ETHE.

Academic network

Editorial Boards
243

65%   35%

| 74% Europe | 22% America |

| 2% Oceania | 1.2% Asia | 0.4% Africa |

Authors
1,534

55%   45%

| 81% Europe | 16% America |

| 1.9% Oceania | 0.9% Asia | 0.2% Africa |

Reviewers
537

59%   41%

| 79% Europe | 15% America |

| 4% Oceania | 1% Asia | 1% Africa |

2,324 Academics

63 Countries

Academic impact

1,694 articles published

| WoS **730** citations |
| Scopus **1,140** citations |
| Google Scholar **7,171** citations |

Engagement

2,434,075 Web Visits
Since 2009

Web visits by continent

- 49% America
- 46% Europe
- Asia 3%
- Oceania 1%
- Africa 1%

1,765,852 Web Visitors
Since 2009

4,213,787 Web Page views
Since 2009

5,115 Subscribers

5,321 Followers

UOC R&I Open Access Journals

Anàlisi: e-Journal on Communication and Culture.
Artnodes: Art, Science and Technology e-Journal.
BiD: LIS academic texts.
Digithum: A relational perspective on Culture and Society.

Franquisme & Transició: e-Journal on History and Culture.
IDP: Internet, Law and Politics e-Journal.
RUSC/ETHE: Universities and Knowledge Society Journal (RUSC) / International Journal of Educational Technology in Higher Education (ETHE).

02 **Research Processes**

Data management service

- ✓ Information about <u>Research Data Management</u> (RDM) in the Library website

- ✓ 2016 Pilot project on Research Data Management Plan with two H2020 funded projects (PERFORM, TESLA)

- ✓ 2017 Cross-sectional group to support RDM (Law department, IT department, Research Office, Library, VR Globalization & Cooperation

Proposta per establir una política d'accés obert a les dades de recerca a les Universitats de Catalunya

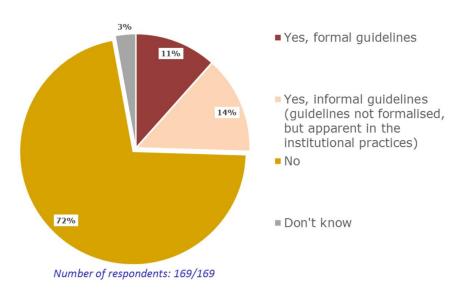(Doc. 16/30) (B6SR\GDR\1603Politiques_rdm-v8, GTSR 11.07.16)

02 Open Data - European Universities

✓ About 25% of universities reported having formal or informal guidelines on open access to research data.

✓ Most of these refer to Research Data Management and are formulated as recommendations.

EUA Survey 2015: Institutional guidelines on open research data

- Yes, formal guidelines
- Yes, informal guidelines (guidelines not formalised, but apparent in the institutional practices)
- No
- Don't know

3%
11%
14%
72%

Number of respondents: 169/169

Universitat Oberta
de Catalunya

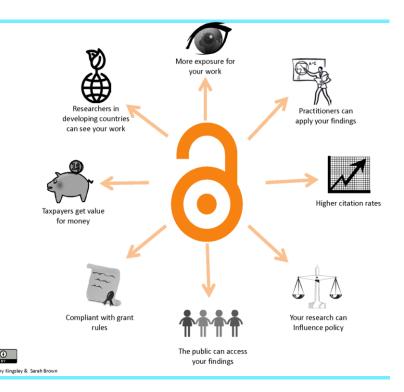**03**
Opportunities & Threats

03 Opportunities

Open access is a strategy to expand the accessibility of research, changing the way universities work with scholarly outputs.

Sharing and **collaboration** are keywords in today's academic practice. The arrival of open access and open data means that the sharing of research data and results, and collaboration in collecting, analyzing and publishing them are becoming increasingly important.

More exposure for your work

Researchers in developing countries can see your work

Practitioners can apply your findings

Taxpayers get value for money

Higher citation rates

Compliant with grant rules

The public can access your findings

Your research can Influence policy

KEEP CALM AND OPEN DATA

03 Opportunities

The NEW ENGLAND JOURNAL of MEDICINE

EDITORIALS

Data Sharing

Dan L. Longo, M.D., and Jeffrey M. Drazen, M.D.

The aerial view of the concept of data sharing is beautiful. What could be better than having high-quality information carefully reexamined for the possibility that new nuggets of useful data are lying there, previously unseen? The po-

This issue of the *Journal* offers a product of data sharing that is exactly the opposite. The new investigators arrived on the scene with their own ideas and worked symbiotically, rather than parasitically, with the investigators holding the

N Eng J Med 2016;374:276-7.

"La visión general del concepto de compartir datos es precioso. ¿Qué podría ser mejor que tener información de alta calidad minuciosamente reexaminada para encontrar nuevos *nichos* de datos útiles que están allí y que no se han sabido ver previamente?"
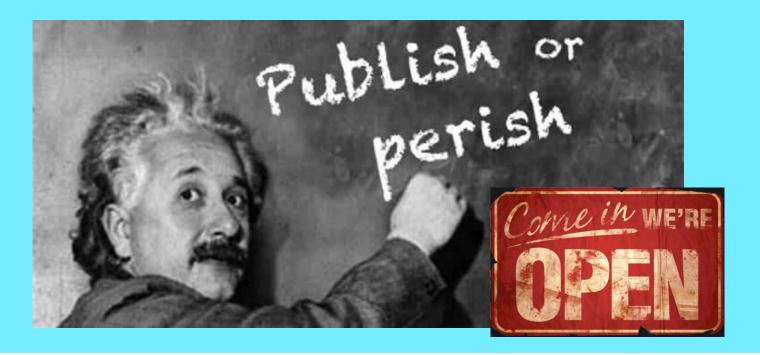
03 **Threats**

✓ Open access is not yet considered a valuable **criteria in the research assessment processes.**

✓ Open access means **free access** to research publications by the end-users, **but is not cost free**: infrastructures, maintenance costs, costs of publishing, human resources, etc.

✓ The **interoperability** between our different research management systems and the institutional repository will be a challenge, but it is indispensable for us to be able to move forward.

✓ **No global commitment**

En ciencia, abrirse o morir

Open Science Seminar
CRUE/CRUP

Clara Eugenia Garcia
Directora General de Política de I+D+i
Secretaría de Estado de Investigación, Desarrollo e Innovación
España

- **Transformación de la ciencia: MOOR** *-Massive Online Open Research-*

  1. **Transición**

  2. Open Access **una cuestión aún por resolver**:

     - **Resultados**:

       a. **Suscripciones** y licencias nacionales (?)

       b. **Compromisos** institucionales (CRUE-CRUP)

       c. **Cultura e incentivos** a los investigadores (evaluación, sexenios, etc)

     - **Datos de investigación**:

       a. **Pilotos**

       b. Generalización (obligatoriedad) y desarrollo de las actividades que ello conlleva

3. **Los retos de la integración de datos de investigación:**

■ **FAIR (Findable, Accessible, Interoperable, Re-usable)**

■ ¿Cómo hacer operativos estos principios?

– <u>Ubicación</u>: papel de repositorios e infraestructuras, interoperabilidad.

– <u>Acceso</u>: condiciones y restricciones

– <u>Interoperabilidad</u>: metadatos, calidad y descripción

– <u>Reutilización</u> y conservación

– <u>Software y servicios </u>de computación avanzada

4. **Los riesgos de no coordinar las iniciativas bottom up**

5. **Problema de estándares**

6. **Financiación**

7.   **Visión compartida y <u>compromiso</u> de los stakeholders:**

- ■   Comisión, EM

- ■   Financiación

- ■   Instituciones e Infraestructuras

- ■   Comunidad(es) de usuarios: investigadores sector público y privado

8.   **Otros sectores de la sociedad**

9.   **Creación de un entorno de confianza (TRUST)**

Open Science Seminar CRUE-CRUP

- La **política de OS** en España y la gestión de datos de investigación
  - **Open Science (2017-2020)**
    - **Hoja de Ruta (ERA-ES)**
    - **Plan Estatal de Investigación Científica y Técnica y de Innovación 2017-2020**
  - **Plan de Acción específico Open Science 2017-2018**
    - ✓ Alineado con la UE
    - ✓ Plataforma de «**stakeholders»: diálogo y consenso**
    - ✓ Integrar y definir las actuaciones en los ámbitos de:
      - ✓ **Infraestructuras (redes e investigación)**
      - ✓ **Datos**
      - ✓ **Resultados**

Open Science Seminar CRUE-CRUP

- **Punto de partida. Agenda política/estratégica compartida. :**
  - Visión y objetivos comunes
  - Compromiso político
  - *CRUE-CRUP: "Iberian universities strongly support the open science and open access movement"*
- ¿Es posible definir un plan de actuación compartido a partir de las respectivas posiciones nacionales?
  - Definir un marco común de acción y de comunicación
    - Reuniones periódicas y MLEs
  - Implementación de actuaciones específicas: co-liderazgo

- **Oportunidad para:**

  1. Incrementar la **colaboración institucional (CRUE-CRUP)**

  2. Acelerar la **colaboración entre stakeholders y expertos**

  3. **Formación** (relacionada con el tratamiento, conservación y valorización de datos de investigación y su análisis): **seminarios y cursos inter universitarios**

  4. Optimizar las oportunidades a partir de las **infraestructuras digitales y proyectos ya existentes.**

  5. Aunar esfuerzos en **proyectos e infraestructuras de investigación en los que participa ES y PT**

  6. Potenciar **expertos** en **gestión** de datos de investigación **y crear una red**

  7. Espacio de diálogo e intercambio que sume y que contribuya a la generación de **CONFIANZA**

Main pillars

| CONNECTIVITY | COLLABORATION | KNOWLEDGGE | COMPUTING | SECURITY |

Scientific Information

Mission:
1) To ensure the community **access** to sources of **scientific information** of recognized prestige and quality;
2) To promote, support and facilitate **open access** to Portuguese scientific production:
3) To **facilitate management and access** to information on national **scientific activity**

biblioteca do conhecimento online **b-on**

RCAAP
Repositório Científico de Acesso Aberto de Portugal
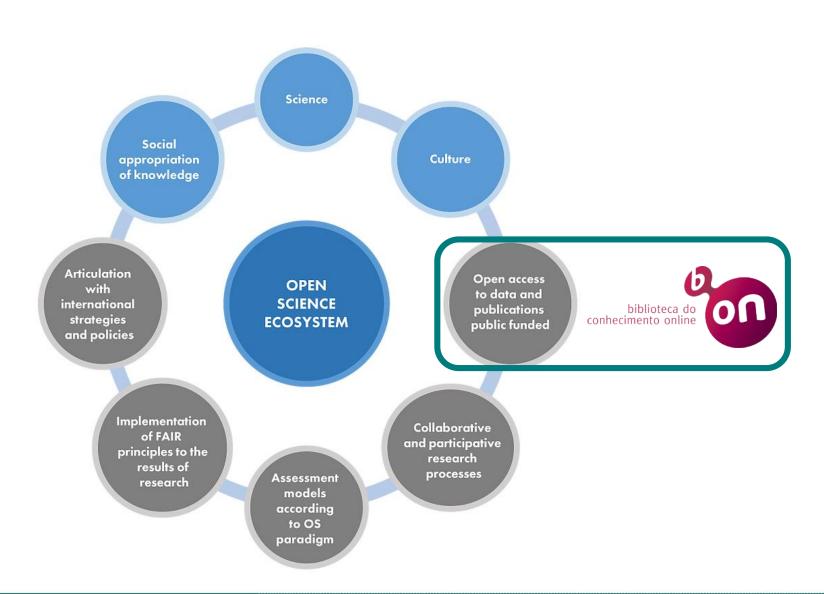
PTCRIS
Connected Research

2004   **2008**   **2015**

Critical success factors

- Global and Integrated control (communication dissemination, training, electronic services and support)

- Governance Model

  - Bodies - Political, funding and operational (responsibility and single point of contact=better cooperation)

  - Centers of expertise (Studies and surveys, Licensing, training, electronic services)

- Business model (buying power, negotiations)

B-on and Open science

Internacional context

European Commission > The Commissioners > Carlos Moedas > Announcements >

SPEECH | 18 October 2016

Open Access in a time of change

*"Public funders at the **European and national level now stand united** behind this **clear goal**: **open access** to the results of the research we invest in by 2020"*

Carlos Moedas

European leaders call for 'immediate' open access to all scientific papers by 2020

Gold vs Green OA in licensing

Towards a competitive and sustainable open access publishing market in Europe

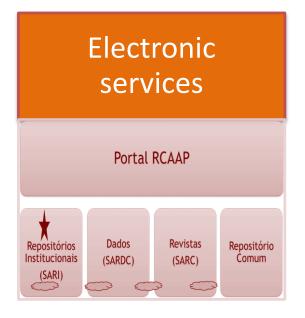Towards a competitive and sustainable open access publishing market in Europe

OPEN ACCESS

A study prepared for the OpenAIRE 2020 project, on behalf of the European Commission

February 2017

Research Consulting   OpenAIRE

Address roadblocks

1. Author incentives

2. Publisher incentives

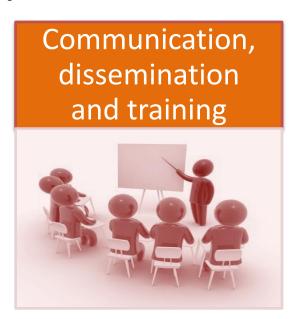3. Competition

4. Pluralism

5. Infrastructure

6. Monitoring

Work in progress

- Created a national task force to:
  - Members: Ministry, FCT, FCT|FCCN, Universities, Polytechnics, Private HEI
  - Promote international partnerships with countries that allow robust alignments in the negotiations;
  - Assist in the preparation and definition of the joint negotiating strategy to be applied for the next cycle (2019-21);
  - Advise team in preparing the next cycle (2019-21).

Mission: promote, support and facilitate **Open access** to the **national scientific production**

Electronic services

Portal RCAAP

Repositórios Institucionais (SARI) | Dados (SARDC) | Revistas (SARC) | Repositório Comum

> 100 Institutions

Support services

Support

16/69 Journals

28/52 IRs

55 Comum

Communication, dissemination and training

>400K docs

>20M downloads

Critical success factors

- **Global and Integrated control** (advocacy, collaboration, partnerships, training and dissemination, support, services and infrastructures)
  - Power and importance of the initiative
  - Power and control over decisions
- **Governance Model**
  - Political, funding and operational (commitment, single contact)
  - Based on centers of expertise (coordination, infrastructures, Services, etc)
    - **Distributed accordingly to partners expertise**
    - National initiative <> from centralization
- **Service Model**
  - Shared resources center = efficiency, economies of Scale (Level of service, Rapid deployment)
  - Free institutions to focus on core/local activities
- **Strong involvement of Institution members**
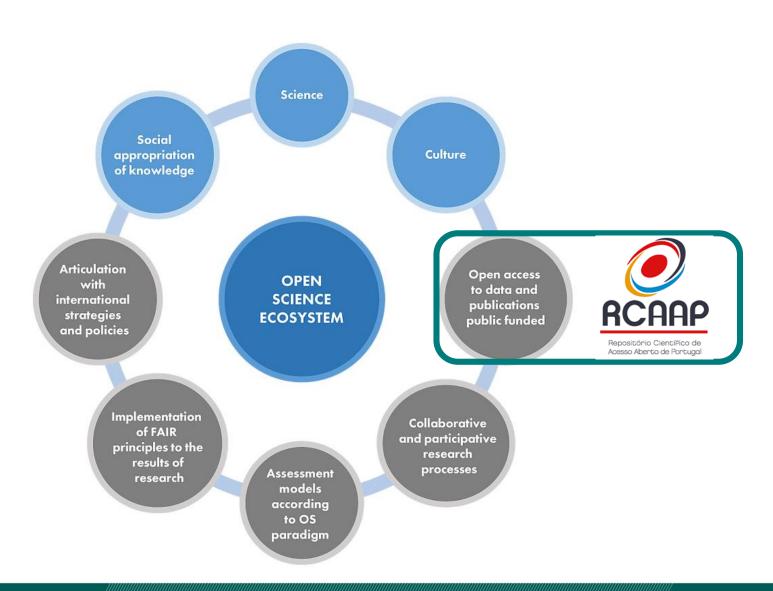
Recognition

- EC OA Policy

- FCT OA Policy

- Legal deposit of T&D

- Open science policy

decreto-lei 115/2013

RCAAP and Open science

Prospective research data services

Central Functions
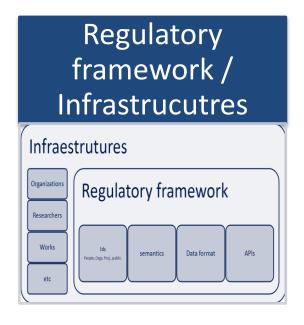
Access and Preservation Platforms
- Long tail data repository
- Research data registry / research data portal
- DMPonline
- Training and capacity build
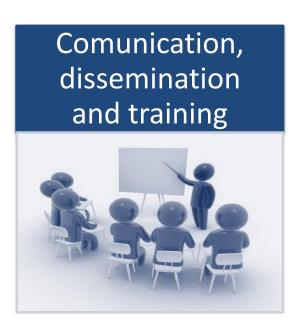
e-Infrastructure commons
- DOI for datasets
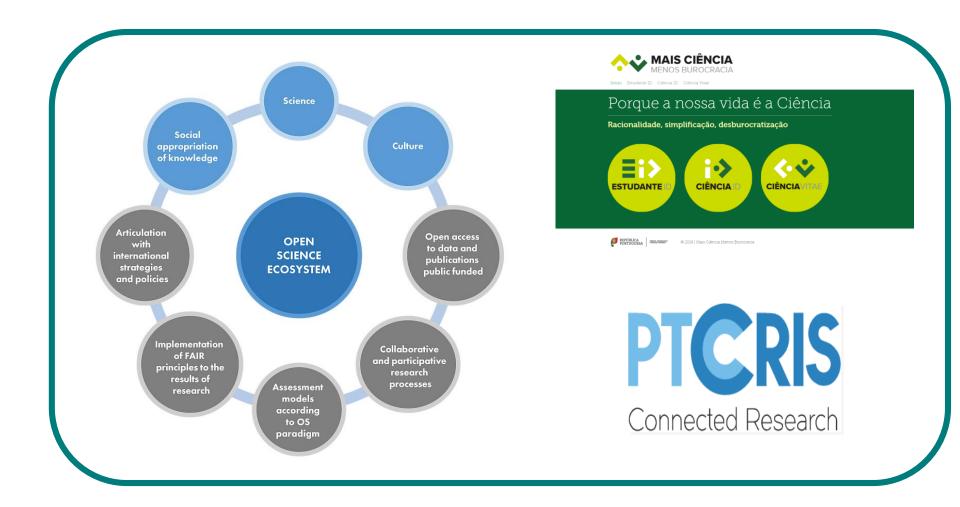- CRIS and Institutional/Research data Repositories

Open science and Research Information Systems

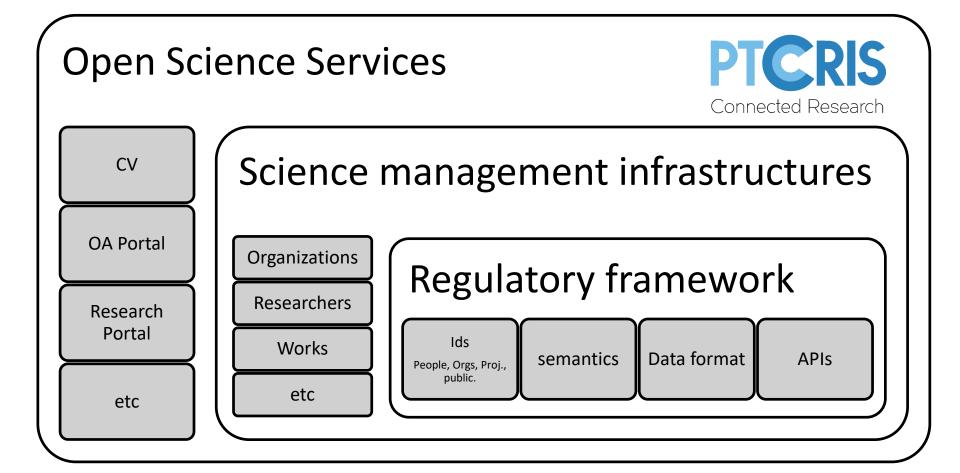# Current Research information systems

Central Functions

Access and Preservation Platforms

e-Infrastructure commons

- Regulatory framework
- Infrastructures (Organizations, Reseachers, Projects, …)

EXCELLENCE | KNOWLEDGE | IMPACT

www.fct.pt